

Index to MECHANICAL ENGINEERING

Volume 85, January–December, 1963

A

- ABBOTT, H. F.
Measurements of auto-oscillation in a hydroelectric supply tunnel and penstock system (A).....Je 70
- ABBOTT, L. H.
Redetermination of the freezing pressure of mercury using improved apparatus and technique (A).....F 82
- ABRASIVES
Statistical polyhedron model of abrasive grain (A).....Je 74
- ACCIDENTS. *See* FLUID MECHANICS
- ACKMANN, L. E.
Design and operation of automatic burner-control system for West Texas Utilities Company—Oak Creek Power Station (A).....Ja 70
- ACOSTA, A. J.
Note on the application of cascade theory to design of axial-flow pumps (A).....My 82
- ACOUSTICS. *See also* FLOW OF FLUIDS
Big horn tests acoustic fatigue (A).....Ap 63
Convertible hard-soft room for machine noise testing (A).....S 63
Deep water sound (A).....S 68
- ACTIVATION ANALYSIS. *See* RADIOACTIVITY
- ADAMS, D. E.
Transient forced convection from a flat plate subjected to a step energy input (A).....N 79
- ADAMS, J. H.
Design of a large door for the JPL space simulator (A).....Mr 72
- ADAMS, JAMES J.
Langley Research Center simulation facilities for manned space missions (A).....O 72
- ADHESION (RAIL). *See* LOCOMOTIVES
- ADHESIVES
Adhesive bonded autos (A).....O 58
- ADKINS, A. W.
Digital computer program for the general axially symmetric thin-shell problem (A).....Ja 74
- ADLER, PHILIP
Calibration experiments with a tetrahedral-type pressure apparatus (A).....F 80
- AERODYNAMICS
Measurement of the effects of viscosity on aerofoil lift using the electrolytic tank (A).....Je 68
Theory of flexible aerodynamic surfaces (A).....N 85
- AGARWAL, J. C.
Blast-furnace fuel injection.....N 52
Technical considerations of fuel injection into the blast furnace (A).....F 84
- AGARWAL, H. R.
Bilinear theories in plasticity and an application to two-dimensional wave propagation (A).....N 85
- AIR
Computation of the critical flow function, pressure ratio, and temperature ratio for real air (A).....Jl 71
- AIR CLEANERS. *See* AIR FILTERS
- AIR CONDITIONING. *See also* TEXTILE INDUSTRY
Study of a solar air conditioner.....Ag 31
- AIR FILTERS
Analysis of gas-turbine wear data for required air-cleaner performance (A).....Ag 68
Bench replaces clean room (A).....My 70
Gas-turbine air-cleaner dilemma (A).....Ag 68
Interim report on dust louver inertial separator application on 8500-hp U.F.P.R. gas-turbine locomotive (A).....Ag 67
- AIR MOTORS. *See* PNEUMATIC SYSTEMS
- AIR POLLUTION
Air pollution control system (A).....Mr 61
Air pollution—what's being done?.....Jl 26
Crankcase ventilation system required (A).....Jl 48
Less than clean (A).....Ja 56

Issue	Letter Code
January	Ja
February	F
March	Mr
April	Ap
May	My
June	Je
July	Jl
August	Ag
September	S
October	O
November	N
December	D

- AIR TRANSPORT. *See also* AIRPLANE ENGINES
Crew composition and selection for the supersonic transport (A).....N 70
FAA program on all-weather landing and its relationship to simulation (A).....Ag 64
Power for the supersonic transport (D).....Jl 74
Progress on supersonic airliner (A).....Mr 69
SST cruise speed must be Mach 3 (A).....D 84
- AIRY, JOHN
Obituary.....S 103
- AIRPLANE ENGINES. *See also* GAS TURBINES
AIAA-ASME Hypersonic Ramjet Conference.....Mr 100
Aircraft engine for Navy ships (A).....O 53
Contaminated fuel testing of engine controls to MIL-E-5000B using the UBN aeronautical engine laboratory technique (A).....Ag 69
1,000,000 hours of jet engine experience.....Ag 42
Power for the supersonic transport (D).....Jl 74
Turbojet/turboprop engines: a performance report (D).....Ag 76
- AIRPLANE HYDRAULIC SYSTEMS
Aircraft pumps for extreme environments (A).....Jl 62
- AIRPLANE LANDING DEVICES. *See* AIR TRANSPORT
- AIRPLANE LAUNCHING SYSTEMS
Turbo-flywheel catapult (A).....O 54
- AIRPLANES
Cinerama simulator (A).....Ap 70
Flight-simulator requirements for high-performance aircraft based on X-15 experience (A).....Ag 62
Multipurpose research laboratory for flight simulation (A).....Ag 65
Triple-threat Swedish jet (A).....Mr 69
- AIRPORTS. *See also* AIR TRANSPORT
Airport luggage handling (A).....Jl 61
- ALBANES, D. J.
Fracture (D).....N 92
- ALBRECHT, P.
High-strength tool geometry—a result of research in tool geometry (A).....O 75
- ALDRICH, ELIZABETH W.
Note on vapor-pressure equations for water (A).....N 70
Vapor pressure tables for water (A).....N 82
- ALDRIN, EDWIN E.
Biography.....D 93
Elected Fellow of ASME.....D 93
- ALFORD, J. S.
Protection of labyrinth seals from flexural vibration (A).....Jl 58
- ALFREY, T., Jr.
Continuous mixing of very viscous fluids in an annular channel (A).....Je 73
- ALLEN, C. M.
Rheological behavior of the lubricant in the contact zone of a rolling contact system (A).....D 64

- ALLEN, ELEANOR
Russian-English physics dictionary (BR).....S 82
- ALLEN, R. W.
Friction and heat-transfer measurements to turbulent pipe flow of water ($Pr = 7$ and 8) at uniform wall heat flux (A).....N 84
- ALLOYS. *See* COPPER
- ALTON, DARREL DOW
Obituary.....D 96
- ALUMINUM
Aluminum in oil and gas drilling operations (A).....D 68
- ALUMINUM ALLOYS. *See* CONDENSERS
- AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS
AIAA-ASME Hypersonic Ramjet Conference.....Mr 100
Joint AIAA-ASME Aerospace Reliability and Maintainability Conference.....Mr 102
- AMERICAN INSTITUTE OF CHEMICAL ENGINEERS
ASME-AICHE Heat Transfer Conference.....Je 101
- AMERICAN POWER CONFERENCE
To hold silver anniversary meeting, 1963.....F 99
- AMERICAN SOCIETY OF MECHANICAL ENGINEERS
Applied Mechanics Division Conference, 1963.....My 112
West Coast Conference, 1963.....Jl 91
ASME-IEEE National Power Conference Program.....Ag 86
Aviation and Space, Hydraulic, Gas Turbine Conference program, 1963.....Ja 114
Codes and Standards Workshop.....F 105
Ap 108, My 118, Je 104, Jl 73, Ag 95, N 109
Committees
National nominating committee organizes for 1964.....Ag 95
Council
Actions, 1962.....F 106
Actions, 1963.....S 96
Executive Committee actions.....Ja 118
Mr 108, Ap 109, My 119, Jl 94, N 108
Decisions that face ASME (C).....Ap 86
Design Engineering Conference, 1963.....F 100, Mr 98, Ap 99, Jl 84
Dollars and sense.....F 112, D 22
Energetics Professional Division planned for ASME.....Ag 85
Finances 1961-1962; 1960-1961.....Ag 110
Inside ASME.....Ja 124, F 112, M 112, Ap 114, My 124, Je 108, Jl 101, O 114, D 98
Junior Forum.....Ja 117, F 103, Mr 106, My 117
Lubrication Division
ASLE-ASME Lubrication Conference, 1963.....S 94
Machine Design Division Conference, 1963.....Ap 99
Maintenance and Plant Engineering Division Conference, 1963.....Mr 100
Management Division
Joint Engineering Management Conference, 1963.....Jl 91
Materials Handling Division
Joint IEEE-ASME Materials Handling Conference, 1963.....S 95
Meetings
Calendar of meetings.....Ja 113, F 96, Mr 97, Ap 98, My 104, Je 93, Jl 83, Ag 81, S 89, O 94, N 99, D 85
Heard at ASME meetings.....My 85
Heat Transfer Conference, 1963.....Je 101
Joint AIAA-ASME Aerospace Reliability and Maintainability Conference.....Mr 102
RAC Meetings schedule, 1963.....F 107, Mr 109
Seen at ASME meetings.....My 102, N 102
Spring Lubrication Symposium, 1963.....Ap 106
Summer Annual Meeting, 1963.....Ap 104
Winter Annual Meeting, 1962.....Ja 93

(A) denotes Abstract; (AC) Author's Closure; (BR) Book Review; (C) Correspondence; (D) Discussion; (Ed) Editorial

ASME (continued)

Winter Annual Meeting, 1963.. S 90, O	113
Members	
Fellows elected.. Ja 91, F 101, Ap 108,	
Ja 100, JI 91, Ag 84, S 101, O 106, D	93
Life insurance plan approved for ASME	
members.. Mr	108
Selection of ASME Fellows (C).. D	74
Candidates.. Ja 119, F 109,	
Mr 110, Ap 112, My 121, Je 104,	
Jl 96, Ag 96, S 103, O 107, N 111, D	94
News..	
Ja 92, F 97, Mr 98, Ap 99, My 105, Je	
94, Jl 84, Ag 82, S 90, O 95, N 100, D	86
Obituaries.. Ja	
120, F 110, Mr 111, Ap 113, My 122, Je	
105, Jl 97, Ag 97, S 103, O 108, N 112, D	96
Officers	
New officers elected by letter ballot.. N	105
Nominations open for 1965.. N	109
Oil and Gas Power Division Conference,	
1963.. Ap	105
Petroleum Mechanical Engineering Con-	
ference, 1963.. Je 99, Ag 88, N	104
Production Engineering Division Con-	
ference, 1963.. Mr	103
Publications	
Availability list of Applied Mechanics	
Conference papers, 1963.. Ag	89
Applied Mechanics West Coast Con-	
ference papers, 1963.. O	99
Aviation and Space, Hydraulic, and	
Gas Turbine Conference papers,	
1963.. My	108
Design Engineering Conference	
papers, 1963.. Jl	92
Engineering Management Conference	
papers, 1963.. N	107
Heat Transfer Conference papers,	
1963.. S	95
Lubrication Conference papers,	
1963.. D	92
Maintenance and Plant Engineering	
Conference papers, 1963.. Je	103
Materials Handling Division papers,	
1963.. D	92
National Power Conference papers,	
1963.. N	107
Oil and Gas Power Conference pa-	
pers, 1963.. Jl	92
Petroleum Mechanical Engineering	
Conference papers, 1963.. N	107
Production Engineering Conference	
papers, 1963.. Je	103
Railroad Conference papers, 1963.. Je	103
Textile Engineering Conference pa-	
pers, 1963.. My	109
Unpublished ASME papers, 1962.. Ag	73
Winter Annual Meeting papers,	
1962.. Ja	105
Elizabeth Ketchledge, technical proof-	
reader, retires.. Mr	106
"Mechanical Engineering" new look	
(C).. N	90
"Mechanical Engineers" Catalog.. O	99
1962, ready for distribution.. O	105
New personnel join "Mechanical En-	
gineering".. O	105
Proceedings of special conferences and	
symposiums.. D	92
"Unwritten Laws of Engineering" still	
available (from ASME Order de-	
partment).. N	114
Railroad Division	
IEEE-ASME Railroad Conference,	
1963.. Mr	101
Student Sections	
Regional Student Conference reports,	
1963.. O	100
Regional Student Conferences meet.. O	99
Regional Student Conferences Sched-	
ule, 1963.. Mr	107
"What's my line" panel draws student	
section members.. S	100
Technical Digest of ASME papers..	
Ja 68, F 76, Mr 72, Ap 76, My 78,	
Je 64, Jl 58, Ag 62, S 72, O 68, N 76, D	62
Technology Executives' Conference,	
1963.. Ap	105
Television presentation on WNDT	
(NYC).. My 116, S	93
Textile Engineering Division Confer-	
ence, 1963.. F	98
Woman's Auxiliary	
Announces mechanical engineering	
student awards.. N	106
Inside ASME.. N	114
Winter Annual Meeting, 1962.. Ja	111

AMES, ROBERT K.	
Present status of the Sabatier life support	
system (A).. Jl	60
AMES, W. C. JR.	
Hydrogen embrittlement at Linden	
Generating Station (A).. D	64

AMES, W. F.	
Extension of a method of solution for	
Poisson's equation (A).. O	80
AMORELLI, D.	
Space flight training programs (A).. N	76
ANDERSON, G. ROBERT	
Obituary.. Jl	98
ANDERSON, J. R.	
Use of compressor-inlet prewhirl for the	
control of small gas turbines (A).. Ag	69
ANDERSON, JAMES HILBERT	
Biography.. D	93
Elected Fellow of ASME.. D	93
Internal bearings in centrifugal gas com-	
pressors (A).. Je	75
ANEMOMETERS	
Some corrections to the linearized re-	
sponse of a constant-temperature hot-	
wire anemometer operated in a low-	
speed flow (A).. Mr	80
ANG, D. D.	
Bending stress in a cracked plate on an	
elastic foundation (A).. O	78
ANGRIET, S. W.	
On the boundedness of the dimensionless	
index of performance of a Nernst ef-	
fect generator (A).. O	78
On the choice of coordinates used to de-	
scribe thermoelectric and thermomag-	
netic generators (A).. O	79
Thermoelectric-hydromagnetic pump (A)	
.. N	80
ANGULO, EARL D.	
Explorer X—evaluation of structural	
design (A).. Mr	73
ANTENNAS. See KADAR ANTENNAS	
ANTIFRICTION BEARINGS. See also LU-	
BRICATION	
Cruel to mules? no, nor to railroads	
(A).. O	60
Effects of misalignment on the forces	
acting on the retainer of ball bearings	
(A).. D	65
ANVILS. See HIGH-PRESSURE RESEARCH	
APODACA, DAVID R.	
Fatigue testing of sandwich construction	
by dynamic test method (A).. Jl	62
APPLEBY, E. C.	
Space-age drive for rapid transit cars (A)	
.. S	78
APPLEY, LAWRENCE A.	
Gantt Gold Medal.. N	97
APPLIED MECHANICS	
Heat transfer, applied mechanics, and	
creep conferences focus on basic me-	
chanical engineering.. O	95
ARCHER, R. R.	
On the influence of uniform stress states	
on the natural frequencies of spherical	
shells (A).. My	89
ARCHER. See STRUCTURES	
AREY, M. N.	
Emission of radiant heat from small-scale	
pulverized-coal flames (A).. N	83
ARENI, R. J.	
Uniaxial wave propagation in realistic	
viscoelastic materials (A).. N	86
ARGUE, FREDERICK WILLIAM	
Biography.. Ja	91
Elected Fellow of ASME.. Ja	91
ARMSTRONG, GEORGE SIMPSON	
Obituary.. My	122
ARTIGAS, R.	
Experience with mobile gas turbines (A)	
.. Ag	69
ARWAS, E. B.	
Analysis of plain cylindrical journal bear-	
ings in turbulent regime (A).. D	66
ASSEMBLIES. See MINIATURIZATION,	
PLASTICS	
ASTILL, K. N.	
Studies of the developing flow between	
concentric cylinders with the inner	
cylinder rotating (A).. O	77
ASTRONAUTS. See SPACE TRAVEL	
ATKINSON, C. P.	
Stability of the normal modes of non-	
linear systems with polynomial ro-	
tating forces of high degree (A).. Je	77
ATKINSON, G. L.	
Void fraction measurements in a cavitat-	
ing venturi (A).. Jl	63
ATTENBURY, T. J.	
Stresses during shipping, handling, and	
laying thin-wall pipe (A).. Mr	76
ARTSCHULER, WILLIAM HOWARD	
Obituary.. Jl	98
AUDIO-VISUAL SYSTEMS. See EDUCATION,	
INDUSTRIAL TRAINING	
AUSLAENDER, J.	
Supercavitating foils with flaps beneath	
a free surface (A).. Je	69

AUBMAN, J. S.	
Amplitude frequency response analysis	
and synthesis of unfactored transfer	
functions (A).. Je	78
Linearized pH stability theory for trans-	
latory half-speed whirl of long, self-	
acting gas-lubricated journal bearings	
(A).. Jl	68
AUTOMATIC CONTROL. See also MACHINE	
TOOLS, MATHEMATICS, WEIGHING MA-	
CHINES	
Design and operation of automatic	
burner-control systems for West Texas	
Utilities Company—Oak Creek Power	
Station (A).. Ja	70
Drill, mill, tap, and bore with numerical	
control (A).. Je	55
Flame monitoring and combustion sta-	
bility-progress report on automation	
of tangentially fired coal-burning steam	
generators (A).. Ja	70
International Bibliography of Automatic	
Control; a new quarterly publication	
.. Mr	95
Nonelectronic numerical control system	
for machine tools (A).. Je	54
Transient optimization in optimizing	
control (A).. Jl	68
AUTOMATION. See also TRANSPORTATION,	
WAREHOUSES	
Building automation (A).. S	75
Effect of automation on society to be dis-	
cussed at Joint Engineering Meeting,	
June, 1963.. My	110
AUTOMOBILES. See MOTOR VEHICLES	
AVALLON, GEORGE MARTIN	
Obituary.. S	103
AVERY, R. W.	
Investigation of the effect of journal finish	
on traction motor-support-bearing per-	
formance (A).. O	72
AVILES, IGNACIO	
Obituary.. F	110
AVITZUR, BETZALEL	
Upper bound approach to cold-strip roll-	
ing (A).. O	75
AYDELOTT, J. C.	
Locomotives: a new design approach to	
engine cooling (AC).. Ja	80

B

BARR, STANLEY E., JR.	
Some notes concerning Bridgman's man-	
ganin pressure scale (A).. F	83
BACHMAN, WALTER CRAWFORD	
Biography.. Ja	91
Elected Fellow of ASME.. Ja	91
BACK, A. L.	
Rubber & plastics—for process plants.. O	46
BACKOFEN, W. A.	
Size and speed effects from lubricant	
breakdown in plastic compression (A)	
.. Je	73
BACON, H. E.	
Case histories of hydrogen damage in	
boilers (A).. D	63
BAHNKE, G. D.	
Effect of longitudinal heat conduction	
on periodic-flow heat exchanger per-	
formance (A).. Jl	58
BAIRD, ANDREW GEMMELL MILLAR	
Obituary.. Je	106
BAIRD, R. D.	
Procedure for calculating the packet fre-	
quencies of steam turbine exhaust	
blades (A).. Je	65
BAKER, M. L.	
Systems for extracting and utilizing en-	
gine rejected heat (A).. S	74
BAKER, MICHAEL D.	
Effect of an aluminum condenser on	
boiler water (A).. My	82
BAKER, P. H.	
Investigation of the effect of journal	
finish on traction motor-support-	
bearing performance (A).. O	72
BAKKE, ROGER MARTIN	
Transient optimization in optimizing	
control (A).. Jl	68
BALDUR, R.	
Theoretical design of a high-head axial-	
flow reversible pump-turbine (A).. Je	70
BALL BEARINGS. See ANTIFRICTION BEAR-	
INGS	
BALLISTICS	
Ballistic perforation dynamics (A).. N	85
BALLMAN, HARRY CHARLES	
Obituary.. My	122
BANCHE, J.	
Axial-load design for high-performance	
radar-antenna structures (A).. Mr	74
BARIL, A. M.	
Government control of packaging (C)	
.. Ag	74
BARKAN, PHILLIP	
Impact behavior of elastomers (A).. Je	72

(A) denotes Abstract; (AC) Author's Closure;
(BR) Book Review; (C) Correspondence;
(D) Discussion; (Ed) Editorial

BANKER, HARRY Obituary.....	O	108	BEARINGS (continued)			BLATT, S. J. Stability of the normal modes of non-linear systems with polynomial restoring forces of high degree (A).....	Je	77
BANKER, JOSEPH W. To receive the Kettering Award.....	F	94	Linearized pff stability theory for trans-latory half-speed whirl of long, self-acting gas-lubricated journal bearings (A).....	Je	68	BICKLER, DONALD B. Calibration of a solar simulator (A).....	Je	65
BANKER, R. S. Method of samples perturbation applied to transient heat-flow problems (A).....	Ag	64	Load capacity of short journal bearings with oscillating effective speed (A).....	D	66	BIEK, JOHN R. Optimization of gas-transmission system operations and expansions using simulation techniques (A).....	Je	65
BARNARD, NILES HUTTON Biography.....	Ag	93	Magnetic bearing (A).....	F	63	BIENSTOCK, DANIEL Coal industry: a protest (C).....	D	75
Nominated for Vice-President.....	Ag	93	New bearing lubrication system (A).....	S	65	Is coal the fuel for MHD power?.....	O	38
BARNES, B. B. Speed control of precise power generating sets (A).....	Je	66	Requirements and possible solution for lubrication of bearings and gears in a space simulator (A).....	Mr	74	Removal of sulfur oxides from flue gas with alkaliized alumina at elevated temperatures (A).....	D	68
BARNETT, RALPH LIPSEY Selection of material in minimum weight design (A).....	O	69	Solution for the pressure distribution in a short gas journal bearing (A).....	O	73			
BARNETT, ROBERT M. Multipurpose research laboratory for flight simulation (A).....	Ag	65	Stability and dynamics of rotors supported on fluid-film bearings (A).....	Je	76	BILLARD, P. P. General procedure for analyzing thick shells of irregular shapes for mechanical and thermal loading (A).....	Mr	75
BARNOSKI, RICHARD L. On the resonant frequencies and mode shapes for a cantilevered "L" frame (A).....	Je	60	Stability of the high-speed journal bearing under steady load (A).....	Je	67	BIOMECHANICS. See also PROSTHETIC DEVICES Biomechanics—what is it?.....	Ja	25
BARONET, C. N. Study of the vibrations of shallow spherical shells (A).....	N	84	Static and dynamic characteristics of self-acting, partial-arc gas journal bearings (A).....	D	66	Biomechanics—what is it? (A).....	Ap	78
BARNOWA, J. F. Upstream separation point for an internal corner in a two-dimensional channel flow (A).....	O	80	Steady-state whirl in journal bearings for a vertical flexible rotor system (A).....	O	73	BIOMEDICAL ENGINEERING Engineers and life scientists work together at nation's first biomedical engineering research center.....	My	98
BARS Longitudinal strain pulse propagation in wide rectangular bars—part 1—theoretical considerations (A).....	Ap	80	BEAVER, HARRY EDGAR Obituary.....	Mr	111	BIOT, M. A. Are we drowning in complexity?.....	F 26, My	92
Longitudinal strain pulse propagation in wide rectangular bars—part 2—experimental observations and comparisons with theory (A).....	Ap	80	BECHTOLD, NORMAN F. Microminiaturization assembly techniques (A).....	O	68	Timoshenko Medal.....	Ja	101
BARNHES, E. J. Calculation of the performance of surface condensers by digital computer (A).....	D	67	BECKER, EDWARD L. Obituary.....	D	96	BIRKBAK, R. C. Effect of surface roughness on the total hemispherical and specular reflectance of metallic surfaces (A).....	O	76
BATCHINE. See WEIGHING MACHINES			BECKER, HERBERT Photothermoelastic investigation of thermal stresses in flat plates (A).....	My	89	BISHOP, J. W. World's highest capacity roadable steam generator (A).....	F	84
BATES, T. M. Flame monitoring and combustion stability—progress report on automation of tangentially fired coal-burning steam generators (A).....	Ja	70	BECKER, K. M. Measurements of burnout conditions for flow of boiling water in a vertical annulus (A).....	N	81	BISSELL, WILLIAM DOUGLAS Obituary.....	D	96
BAUDRY, R. A. Theoretical approach to the evaluation of ultrasonically detected flaws in rotor forgings (A).....	Ja	69	BECKER, P. W. Simple stability criterion (A).....	Je	78	BLACK, ARCHIBALD Metric system: should we convert? (D).....	F	86
BAXAE, ROBERT Lubricant evaluation for 840 F and 1000 F maximum temperature ball-bearing, screw-thread actuators (A).....	Je	68	BECKER, R. C. Automatic and semiautomatic, gas-shielded, metal-arc welding processes for production (A).....	O	70	BLACKALL, FREDERICK S., JR. Frederick S. Blackall, jr.—1896-1963 (Ed).....	S	33
BEAM, ALBERT STEVEN Obituary.....	Ap	113	BECKER, S. E. Constructing low-leakage reactor housing using conventional materials (A).....	My	79	Obituary.....	Ag	98
BEAMS. See also COLUMNS Analysis of L-shaped levers with varying fillet radius and pivot hole location (A).....	Je	66	BEITCH, L. General analytical approach for complex redundant structures (A).....	Ag	62	BLADES. See STEAM TURBINES		
On the accuracy of the Bernoulli-Euler theory for beams of variable section (A).....	O	80	BELL, CLINTON, W., SR. Obituary.....	Ag	97	BLAKE, WINCHESTER GOULD Biography.....	Ja	117
Plastic deformation of a cantilever beam with strain-rate sensitivity under impulsive loading (A).....	N	88	BELL, J. C. Rheological behavior of the lubricant in the contact zone of a rolling contact system (A).....	D	64	Elected Fellow of ASME.....	Ja	117
Stresses and deflections in built-in beams (A).....	Je	66	BELT CONVEYERS. See MATERIALS HANDLING			BLAKELEE, C. E. For power plants: variable-pressure operation?.....	Ag	38
BEAR, FRED T. Obituary.....	My	122	BELTING On the lateral creep of flat belts (A).....	Je	66	Improved station heat rate with variable-pressure operation (A).....	Je	64
BEARDSLEY, E. G. Gas engine-driven compressor bearing evaluation (A).....	S	72	Resilient belt conveyor (A).....	O	54	BLANKENSHIP, V. D. Effects of oscillation on free convection from a vertical finite plate (A).....	N	83
BEARINGS. See also ANTI-FRICTION BEARINGS, LUBRICATION, ROTORS, VIBRATION Analysis of an improved planetary gear-transmission bearing (A).....	D	64	BELTS. See TRANSPORTATION			BLAST FURNACES. See also IRON AND STEEL MANUFACTURE Blast-furnace fuel injection.....	N	52
Analysis of plain cylindrical journal bearings in turbulent regime (A).....	D	66	BENEDICT, ROBERT P. High response aerosol probe for sensing gaseous temperature in a two-phase, two-component flow (A).....	Je	63	Koppers high-pressure solids injection system (A).....	F	84
Bearing analyzer (A).....	Je	62	Steady-state thermal analysis of a thermometer well (A).....	Je	65	Oil injection into blast furnaces (A).....	F	83
Bearing research (A).....	N	57	BENNETT, C. O. Calibration of a controlled-clearance pressure balance up to 8000 bars (A).....	F	82	Technical considerations of fuel injection into the blast furnace (A).....	F	84
Comparison between theories and experiments for the threshold of instability of rigid rotor in self-acting, plain-cylindrical journal bearings (A).....	O	73	BENNETT, E. C. For a nuclear loop: gas bearings.....	Je	26	BLATT, JOSEPH D. FAA program on all-weather landing and its relationship to simulation (A).....	Ag	64
Compressible squeeze films and squeeze bearings (A).....	D	65	For a nuclear loop: gas bearings (AC).....	O	83	BLATT, THOMAS A. An experimental investigation of an improved vortex cooling device (A).....	Ja	76
Dynamic gyro bearing (A).....	O	55	Parameter representation of the yield behavior of iron (A).....	Je	69	BLENNERN, K. A. Stresses due to a band of normal stress at the entrance of a circular hole (A).....	Ap	80
Finite magnetohydrodynamic journal bearing (A).....	D	64	BENSON, EARLE GUSTAV Obituary.....	O	108	BONCO, R. P. Radiation heat transfer in semigray enclosures with specularly and diffusely reflecting surfaces (A).....	S	78
For a nuclear loop: gas bearings.....	Je	26	BERGLES, A. E. Determination of forced-convection surface-boiling heat transfer (A).....	N	82	BORROWSKY, ALFRED Pressure alterations through use of solid containers or jackets in high-pressure environments (A).....	F	78
For a nuclear loop: gas bearings (D).....	O	83	BERGMAN, ELMER OTTO Biography.....	F 102, Ag	90	BOELTER, L. M. K. Richard Mollier—100th anniversary.....	D	38
Gas engine-driven compressor bearing evaluation (A).....	S	72	Elected Fellow of ASME.....	F	102	BOGT, D. B. Buckling of drill pipe in an inclined hole (A).....	D	69
Geometry effects on the threshold of half-frequency whirl in self-acting, gas-lubricated journal bearings (A).....	O	74	Nominated for President.....	Ag	90	Evaluation of the fixed point method of vibration analysis for a particular system with initial damping (A).....	My	86
Hydrostatic bearing for haystack (A).....	Ag	74	BERKLEY, WILLIAM ERNEST Obituary.....	Je	106	BOILER AND PRESSURE VESSEL CODE OF ASME ASME pressure vessel code for the nuclear age.....	F	97
Hydrostatic gas journal bearing with journal rotation and vibration (A).....	O	74	BERKOWITZ, H. M. Longitudinal impact of a semi-infinite elastic cylindrical shell (A).....	N	84	Five new addenda issued.....	Je	90
Influence of finite-wall conductance on load capacity of the magnetohydrodynamic slider bearing (A).....	D	65	BERNHARDT, E. Experience with mobile gas turbines (A).....	Ag	69	Interpretations.....	Ja 82, F 90, My 96, Ji 79, O	88
Internal bearings in centrifugal gas compressors (A).....	Je	75	BERRY, W. R. Prevention of cyclic thermal-stress cracking in steam turbine rotors (A).....	D	68	Revisions and addenda.....	Ja 83, F 91, My 97, Ji 80, S 85, O	88
Investigation of the effect of journal finish on traction motor-support-bearing performance (A).....	O	72	BERVILLIUM Beryllium for aerospace design (A).....	F	59			
			BEVILACQUA, FRANK Some nuclear safety considerations of the BONUS reactor power station design (A).....	My	79			

BOILER CORROSION		
Case history: hydrogen-damage experience in a boiler (A).....	D	64
Case history of hydrogen damage (A).....	D	63
Case histories of hydrogen damage in boilers (A).....	D	63
Embrittlement in one of four boilers (A).....	D	62
Experiences with hydrogen embrittlement in the Consolidated Edison system (A).....	D	63
Hydrogen damage in a 1250-psi boiler (A).....	D	62
Hydrogen damage in power boilers (A).....	D	62
Hydrogen damage in pure-water boiler (A).....	D	63
Hydrogen damage to no. 2 boiler at Armstrong power station (A).....	D	62
Hydrogen embrittlement—a case history (A).....	D	62
Hydrogen embrittlement at Linden Generating Station (A).....	D	64
Metallurgical investigation of hydrogen-damaged boiler tubes (A).....	D	62
Operating experience with chemical-slurry spray process in retarding fire-side deposits and corrosion (A).....	J	70
Sulfur chemistry and its role in corrosion and deposits (A).....	J	71
BOILER FURNACES		
Coal slurry-firing at the Werner Station (A).....	Ja	69
BOILER TESTS		
Approach to automatic data taking in field testing boilers (A).....	Je	66
BOILER TUBES		
Design of furnace tubes for the creep-rupture range (A).....	Mr	75
BOILERS. See also BURNERS		
Design of simplified combustion control system for supercharged steam generators (A).....	Ap	77
Development and evaluation of a supercharged steam generating system (A).....	Ap	76
Preventive maintenance in boiler safety.....	N	42
Supercharged steam generator; its first shipboard installation (A).....	Ap	76
Supercharger design for a supercharged steam generator (A).....	Ap	76
Swiss packaged boiler (A).....	N	75
BOILING. See also FLOW OF FLUIDS		
Analysis of the critical heat-flux condition in high-pressure boiling water flows (A).....	Je	67
Bubble boundary layer and temperature profiles for forced convection boiling in channel flow (A).....	Je	67
Correlation for boiling heat transfer to saturated fluids in convective flow (A).....	N	80
Critical heat flux for nearly saturated water flowing normal to a cylinder (A).....	Mr	78
Critical heat flux for subcooled water flowing normal to a cylinder (A).....	Mr	78
Critical heat fluxes and flow patterns in high pressure boiling water flows (A).....	Mr	78
Dominant unstable wavelength and minimum heat flux during film boiling on a horizontal cylinder (A).....	O	76
Film boiling on a horizontal tube in increased gravity fields (A).....	N	79
Influence of axial heat-flux distribution of the departure from nucleate boiling in a water-cooled tube (A).....	My	78
Prediction of low-quality boiling voids (A).....	N	79
BOLEY, BRUNO A.		
On the accuracy of the Bernoulli-Euler theory for beams of variable section (A).....	O	80
Transient coupled thermoelastic boundary value problems in the half-space (A).....	Je	76
BONAMY, S. E.		
Analysis of the Otto cycle taking into consideration the effect of varying operating parameters (A).....	Je	66
BONNET, FRANK, HENRY		
Obituary.....	Je	106
BOOK REVIEWS		
Berechnungen, Konstruktionsgrundlagen und Bauelemente spanender Werkzeugmaschinen.....	Mr	85
Design and the education of mechanical engineers (BR).....	O	85
Energy conversion (BR).....	Je	81
Geschichte des Deutschen Maschinenbaus von 1860 to 1918.....	Mr	85
Industrial electrostatic precipitation (BR).....	D	74
Managing creative scientists and engineers (BR).....	S	81
Mechanical properties of metals.....	My	93
BOOK REVIEWS (continued)		
Principles underlying systems engineering.....	Ag	77
Professional achievement for engineers and scientists (BR).....	N	93
Russian-English physics dictionary (BR).....	S	82
Selbstverregte Schwingungen an Werkzeugmaschinen.....	Mr	84
You ought to patent that.....	Ap	89
BOOKS RECEIVED IN LIBRARY		
Ja 50, F 58, Mr 58, Ap 59, My 60, Je 57, Ji 45, Ag 50, S 60, O 52, N 61, D 47		
Ja 52, Ji 75, Ag 77, S 82, O 85, N 94, D 78		
BOOY, M. L.		
Influence of channel curvature on flow, pressure distribution, and power requirements of screw pumps and melt extruders (A).....	Je	71
BOHLER, LESTER COMLY		
Obituary.....	D	96
BOUNDARY LAYER. See also HEAT TRANSFER		
Boundary layer and transition characteristics of a rotating cone (A).....	Je	69
Effect of diffusion thermo and thermal diffusion for helium injection into plane and axisymmetric stagnation flow of air (A).....	N	80
Improved Pohlhausen-type method of calculating the two-dimensional laminar boundary layer in a pressure gradient (A).....	N	81
Measurements of heat transfer from a cylinder with air injection into a turbulent boundary layer (A).....	N	80
Momentum integral approximation for compressible magnetohydrodynamic boundary-layer flow (A).....	O	79
Removal of the boundary layer of a supersonic flow by means of a slot (A).....	Je	77
Turbulent flow at the plane of symmetry of a collateral three-dimensional boundary layer (A).....	Ji	62
BOVEE, JOHN LEMOT, JR.		
Obituary.....	F	110
BOWEN, FRANK MILTON		
Obituary.....	My	122
BOWEN, J. H., JR.		
Antifriction bearing design considerations for solid lubrication (A).....	N	77
BOYADJEFF, G.		
Some applications of the maximum principle to second-order systems, subject to input saturation, minimizing error, and effort (A).....	Ji	68
BOYADJEFF, GEORGE I.		
Measuring surface finish.....	D	42
BOYCE, JOHN		
Designing limited quantity machines (A).....	O	71
BOYER, RALPH L.		
Biography.....	Ja	91
Elected Fellow of ASME.....	Ja	91
BOYNTON, JOHN EDSON		
Obituary.....	Je	106
BRADSHAW, E. J.		
Effect of assembly components and belt construction on superpressure calibration (A).....	F	78
BRADDOCK, GEORGE DAYMAN		
Obituary.....	O	108
BRADNER, J. A.		
Working with fabricated machine-tool weldments (A).....	My	84
BRAKER. See RAILROAD BRAKES		
All-weather brake fluid (A).....	Ap	71
BRANDON, R. E.		
For power plants: variable-pressure operations.....	Ag	38
Improved station heat rate with variable-pressure operation (A).....	Je	64
BRASS		
High-speed strip mill (A).....	Ja	53
BRAYMAN, JACOB		
Ultrahigh pressure calibration: influence of cubic workpiece configuration (A).....	F	81
BRAZING		
Brazing gives "helping hand" (A).....	O	57
BREYMEIER, R. THOMAS		
Obituary.....	F	110
BRICKMAN, ARTHUR D.		
Dynamic characteristics and design criteria for a class of vibration-producing machines (A).....	My	86
BRIDGEMAN, OSCAR C.		
Note on vapor-pressure equations for water (A).....	N	79
Vapor pressure tables for water (A).....	N	82
BRIDGES. See also PLASTICS		
BRIEDEN, O. G.		
Techniques used in gas-compressor indicating and data analysis (A).....	Je	66
BRIEFING THE RECORD		
Ja 50, F 58, Mr 58, Ap 59, My 60, Je 47, Ji 45, Ag 50, S 60, O 52, N 61, D 47		
BRIGGS, LYMAN JAMES		
Obituary.....	Ji	98
BRINLEY, CHARLES EDWARD		
Obituary.....	O	110
BRINSON, LEO T.		
Burning of heavy fuel in a medium-speed, high bmeep engine (A).....	S	74
BROCK, FRANK EDGAR		
Obituary.....	D	96
BROCK, JOHN E.		
Some secondary effects in a simple piping structure under heating (A).....	N	89
BROOKS, G. M.		
Optimization of gasoline plants using mathematical programming (A).....	Ja	71
BROSCHEID, J. L.		
Analysis of an improved planetary gear-transmission bearing (A).....	D	64
BROWN, D. H.		
Combustion control: key to better engine performance (D).....	O	84
BROWN, F. T.		
Combined analytical and experimental approach to the development of fluid-jet amplifiers.....	Je	70
BROWN, HERMAN		
Obituary.....	F	110
BROWN, J. DOUGLAS		
Your learned profession.....	Ap	42
BROWN, J. G.		
Crew composition and selection for the supersonic transport (A).....	N	76
BROWN, K. W.		
Factors in make-or-buy decisions of components and parts (A).....	O	68
BROWN, O. G.		
Turbulent flow of water in plane curved channels of finite depth (A).....	Je	68
BROWN, R. L.		
Axially symmetric flow between prescribed surfaces and pump inlet design (A).....	Ag	70
BROWN, R. O.		
High performance-low pressure turbine element (A).....	D	68
BROWN, R. W.		
Fracture (D).....	N	91
BROWN, S. C.		
Flame monitoring and combustion stability-progress report on automation of tangentially fired coal-burning steam generators (A).....	Ja	70
BRUCE, D. F.		
Gas-turbine peaking power plants and future outlook (A).....	Ag	67
BRUNER, F. D.		
Interim report on dust louvre inertial separator application on 8500-hp U.P.R.R. gas-turbine locomotive (A).....	Ag	67
BRYAN, JAMES B.		
Measuring surface finish.....	D	42
BUBBLER. See BOILING		
On the application of the source theory to the solution of problems involving phase change. Part 1—growth and collapse of bubbles (A).....	O	76
BUCK, LUCIEN		
Obituary.....	Ji	98
BUCKLAND, BRUCE ORIENT		
Biography.....	F	102
Elected Fellow of ASME.....	F	102
BUCKLING		
Buckling of a thin-walled circular cylindrical shell heated along an axial strip (A).....	D	67
Buckling of a very thin cylindrical shell due to an impulsive pressure (A).....	N	88
Buckling of drill pipe in an inclined hole (A).....	D	69
Buckling of simply supported oblique plates (A).....	O	79
Large-deflection analysis of buckling of cylinder under bending (A).....	Je	76
BUDGE, W. L.		
Large nuclear power plants—their commercial availability, operational predictability, and economics (A).....	My	80
BULK MATERIALS. See MATERIALS HANDLING		
BUNTIN, ROGER WILLIAMS		
Obituary.....	Mr	111
BURACK, WILLIAM DUNWOOD		
Obituary.....	D	96
BURGGRAB, O. R.		
Exact solution of the inverse problem in heat conduction theory and application (A).....	N	82
BURETT, FRANK E.		
Packaging the passenger—design for collision project survival car II (A).....	Ap	78

BURKLAND, T. L. Design opportunities with metals (A)...	O	70	CASE, ROBERT F. Government money? (C).....	D	74	CHEN, SEE-FOO Pressure drop and liquid film thickness of two-phase annular and annular-mist (A)	Mr	79
BURNER. <i>See also</i> AUTOMATIC CONTROL			CAST IRON Yttrium nodular cast iron (D).....	Mr	83	CHILDS, JOHN NORRIS Obituary.....	D	96
Burners for shop-fabricated boilers (A)...	F	84	CASTING. <i>See also</i> DIE CASTING, FOUNDRY PRACTICE			CHIP DISPOSAL. <i>See</i> METAL CUTTING		
Flame quenching (A).....	F	84	CASTINGS. <i>See</i> WELDMENTS			CHIPS AND CHIP FORMATION. <i>See</i> METAL CUTTING		
BURNOUT. <i>See</i> HEAT TRANSFER			Steel castings in weldments cut costs.....	Jl	28	CHROSTOV, V. Gravity-gradient excitation of a rotating cable-counterweight space station in orbit (A).....	N	87
BURNS, HOMER S. Obituary.....	Jl	98	CATAFULTS. <i>See</i> AIRPLANE LAUNCHING SYSTEMS			CROW, W. L. On the separation, reattachment, and re- development of incompressible turbu- lent shear flow (A).....	Jl	63
BUSCEMI, V. P. 100, 200, and 400-mw steam and gas tur- bine power plants (A).....	D	67	CATTRELL, W. M. Structural design for space vehicles (A)...	Mr	74	CHRISTENSEN, R. M. Dynamic response of a solid, viscoelastic sphere to translational and rotational excitation (A).....	N	80
BUSINESS MACHINES Instant electronic memory (A).....	Jl	52	CAVITATION. <i>See also</i> PUMPS—ROCKET- ENGINE			CHRISTENSON, JACK D. Use of electrochemical machining for se- lected metal removal (A).....	N	76
BUEZ, E. Steam turbines controlled starting (A)...	Ja	70	Avoids the voids! a discussion of cavita- tion in rotary hydraulic pumps (A)...	Ag	70	CHU, PAUL T. Transient internal natural convection heating and cooling of closed, vertical, cylindrical vessels (A).....	My	78
			Cavitation in an impeller—looking from the inside out (A).....	Ag	71	CHUNG, R. Study of a solar air conditioner.....	Ag	31
			Cavitation in valve-controlled hydraulic actuators (A).....	N	87	CIRLER, WALKER L. Hoover Medal.....	Ja	101
			Cavitation properties of liquids (A)...	Ag	70	The world of Carnot.....	D	40
			Experimental investigations of incipient and desinent cavitation (A).....	Ag	69	CITIZENSHIP A call to citizenship.....	Ap	26
			Observations on cavitation damage in a flowing system (A).....	Je	70	CLARK, J. A. Boiling heat transfer with cryogenic fluids at standard, fractional, and near-zero gravity (A).....	N	81
			On the mechanism of head breakdown in cavitating inducers (A).....	Ag	70	Bubble boundary layer and temperature profiles for forced convection boiling in channel flow (A).....	Je	67
			Pulsation method for generating cavita- tion damage (A).....	Je	63	Effects of oscillation on free convection from a vertical finite plate (A).....	N	83
			Rotating disk approach for cavitation damage studies in high-temperature liquid metal (A).....	Ag	71	On the application of the source theory to the solution of problems involving phase change. Part 1—growth and collapse of bubbles (A).....	O	76
			Somewhat pertinent caution for cavitation pumping machinery (A).....	Ag	72	CLARK, WILLIAM T. Type of mechanical grates for incinerators (A).....	My	87
			Unified theory of cavitation damage (A)...	Je	70	CLAUSSEN, Walter F. Alpha-gamma transformations in iron al- loys—calibration of pressure by duplex differential thermal conductivity anal- ysis (A).....	F	79
			Visual and photographic study of the in- ception of vaporization in adiabatic flow (A).....	Ag	70	CLARKE, RONALD Graphical solutions in Cartesian co- ordinates (A).....	O	77
			Void fraction measurements in a cavita- ting venturi (A).....	Jl	63	CLEAN ROOMS. <i>See</i> AIR FILTERS		
						CLEARY, JAMES WARREN Obituary.....	D	96
			CEMENT Bulk cement conveyor (A).....	Jl	45	CLEERMAN, K. J. Continuous mixing of very viscous fluids in an annular channel (A).....	Je	73
			CEMENT LINING. <i>See</i> PIPE AND PIPING			CLINE, G. B. Effect of internal pressure on the in- fluence coefficients of spherical shells (A).....	Ap	80
			CERAMICS. <i>See also</i> HEAT-EXCHANGE EQUIPMENT, MACHINE TOOLS			CLINGERMAN, ROBERT LOUIS Obituary.....	Ap	113
			High-strength ceramic (A).....	Ap	62	CLOUGHERTY, EDWARD V. Electrical resistivity of iron from 20 to 1250 C at static pressures from 25 to 95 kilobars (A).....	F	78
			CERMAK, J. O. Two-phase pressure drop across vertically mounted thick plate restrictions (A)...	O	77	CLOUTIER, M. Removal of the boundary layer of a super- sonic flow by means of a slot (A).....	Je	77
			CRACK, MILTON A. Vector analysis of linkages (A).....	My	88	CO ₂ REMOVAL SYSTEMS. <i>See</i> SPACE VEHICLES		
			CHADDOCK, J. B. Free convection and radiation heat trans- fer from fin-on-tube heat exchangers (A).....	Ja	76	COAL. <i>See also</i> COMBUSTION, MAGNETO- HYDRODYNAMICS		
			CHAINS. <i>See</i> DRIVES			Coal analysis at Western Electric Com- pany—Hawthorne Works (A).....	F	82
			CHAMNESS, LAWRENCE Silicon cells for pyrheliometers and pyra- nometers (A).....	Jl	64	Coal industry: a protest (C).....	D	75
			CHAMPNEY, RALPH PRESTON Obituary.....	Ap	113	COAL HANDLING Coal handling equipment with automatic reclaiming system—Charles P. Crane Station (A).....	F	82
			CHANG, SHELDON S. L. (author) Energy conversion (BR).....	Je	81	COAL SLURRIES. <i>See</i> BOILER FURNACES		
			CHAO, CHI-CHANG Buckling of a thin-walled circular cylin- drical shell heated along an axial strip (A).....	D	67	COBLE, M. H. Extension of a method of solution for Poi- sson's equation (A).....	O	80
			CHATO, J. G. Natural convection flows in parallel-chan- nel systems (A).....	Je	68	CORRELY, CLARENCE J. Biography.....	S	102
			CHENEY, E. S. Determining design feasibility (A).....	O	71	Elected Fellow of ASME.....	S	102
			CHEMICAL INDUSTRY Rubber & plastics—for process plants.....	O	46	COCUBINSKY, J. Metallurgical investigation of hydrogen- damaged boiler tubes (A).....	D	62
			CHEMICAL PLANTS Safe new method for the internal clean- ing of process equipment and pipelines (A).....	S	75			
			CHEN, JOHN C. Correlation for boiling heat transfer to saturated fluids in convective flow (A)...	N	80			
			CHEN, M. M. Heat, mass, and momentum transfer in- side frosted tubes—experiment and theory (A).....	N	83			
			CHEN, SHIH-YUAN Steady-state heat conduction in a straight fin with variable film coefficient (A)...	O	77			
			CHEN, T. S. Heat transfer and forces for free-molecule flow on a concave cylindrical surface (A).....	Je	68			
			CHENO, H. S. Stability of the high-speed journal bearing under steady load (A).....	Jl	67			
			CHICUREL, R. Cam size minimization by offsetting (A)...	Jl	66			
						(A) denotes Abstract; (AC) Author's Closure; (BR) Book Review; (C) Correspondence; (D) Discussion; (Ed) Editorial		

COFFIN, L. F., JR. Geometrical effects in strain cycled aluminum (A).....	My 85	Computers (continued) "Background noise" eliminated by computer (A).....	D 82	COSTS. See also VALUE ENGINEERING Cost reduction and the young engineer.....	Mr 106
COFFMAN, IRVING LEE Obituary.....	Je 106	Effect of spacewise lumping on the solution accuracy of the one-dimensional diffusion equation (A).....	Je 76	Manpower wastage.....	Jl 38
COHEN, L. Development and evaluation of a supercharged steam generating system (A).....	Ap 76	Fast digital computer from Sweden (A).....	Ap 75	COTTON, K. C. Method for predicting the performance of steam turbine-generators—(16,500 kw and larger) (A).....	Je 64
COHEN, P. Radiotracer test facility for hideout measurements under boiler conditions (A).....	Jl 72	Fluid logic; a new computer technique (A).....	Fe 47	COTTON, ROBERT A. Refractories in incinerator construction (A).....	My 87
COHEN, PAUL Techniques of atomic reactor plant decontamination (A).....	Jl 71	High-speed digital equipment for SST and space simulators (A).....	Ag 64	COURTEL, R. A brief history of friction. Part 1.....	S 55
COLAO, ANGELO Photothermoelastic investigation of thermal stresses in flat plates (A).....	My 89	Low-cost computer (A).....	Ja 58	Part 2.....	O 33
COLE, RENO R. Investigation of electrolytic jet polishing at high current densities (A).....	Je 73	CONDENSATION Condensation of metal vapors during rapid expansion (A).....	Je 67	COUTINHO, JOHN DE S. Biography.....	101
COLEMAN, RICHARD N. Test approaches for simulating operating conditions (A).....	O 68	CONDENSERS. See STEAM CONDENSERS Aluminum surface condenser tubes for steam power plants (A).....	My 82	Elected Fellow of ASME.....	101
COLLEY, CLAY Too coarse—too fine.....	My 52	Central station uses of aluminum alloys for demineralized water storage and condenser tubes (A).....	My 82	COWING, GUY ROSWELL Obituary.....	N 112
COLLIER, DONALD W. R & D—government or industry.....	O 30	Effect of an aluminum condenser on boiler water (A).....	My 82	COXEN, ROBERT BRANON Obituary.....	My 122
COLUCCI, C. A. Sheet-metal perforating using a numerically controlled turret punch press (A).....	S 77	Experience with aluminum condenser tubes at St. Clair Power Plant (A).....	My 81	CRACK PROPAGATION Crack-extension force for a part-through crack in a plate (A).....	My 90
COLUMBS Theoretical and experimental creep analyses of beam-columns (A).....	Jl 69	Seven years of experience with aluminum condenser and heat-exchanger tubes (A).....	My 81	Critical analysis of crack propagation laws (A).....	My 89
COLWELL, L. V. Shock waves and vibration in high-speed milling (A).....	Ap 84	CONDUCTION. See HEAT TRANSFER CONKLIN, ELMER W. End face seals in light hydrocarbon liquids (A).....	D 69	On the crack extension in plates under plane loading and transverse shear (A).....	My 89
Tool life for cuts wherein the cutting speed varies during the cut (A).....	Ap 84	CONV. CHARLES E. JR. Integrated structural/insulation system for hypersonic flight vehicles (A).....	Jl 60	CRACKING. See THERMAL STRESSES CRACKS. See METAL FATIGUE, STRESSES AND STRAINS	
COMBUSTION Combustion control: key to better engine performance.....	My 55, (D) O	CONSTRUCTION MATERIALS New elastomers for the construction industry (A).....	Je 73	CRANDALL, FRANK J. Packaging the passenger—design for collision project survival car II (A).....	Ap 78
Emission of radiant heat from small-scale pulverized-coal flames (A).....	N 83	"Tedlar" PVF film—a new exterior prefinish for building materials (A).....	Je 72	CRANES. See CARGO HANDLING CRANKCASES. See MOTOR VEHICLES	
Flame monitoring and combustion stability-progress report on automation of tangentially fired coal-burning steam generators (A).....	Je 70	CONTAINERIZATION. See SHIPPING CONTAINERS CONTAMINATION. See FUELS CONTROL. See AUTOMATIC CONTROL, BOILERS, ELECTRICAL EQUIPMENT, HYDRAULICS, REMOTE CONTROL, SPACE VEHICLES		CRANKSHAFTS Influence of geometrical design factors on the bending fatigue strength of crankshafts (A).....	My 85
Influence of coal rank on the burning times of single captive particles (A).....	Je 83	CONVECTION. See HEAT TRANSFER CONVERTERS. See also BELTING, MATERIALS HANDLING Bulk cement conveyor (A).....	Jl 45	CREATIVITY Creative engineering (A).....	Ja 117
Influence of particle size and volatile content on the ignitibility of pulverized bituminous coal (A).....	F 83	COOGAN, CHARLES HENRY, JR. Biography.....	Ag 85	Don't make me think (A).....	Ja 52
Procedure for solution of gas-turbine and other combustion heat-balance problems with predetermined air flow (A).....	Jl 60	Elected Fellow of ASME.....	Ag 85	Object: "creativity".....	N 38
COMMUNICATIONS. See also DATA PROCESSING, LENSES Lunar capsule transmitter (A).....	N 69	COOK, LAURIE A. Obituary.....	O 108	CREELMAN, JOHN A. Training for orbital maintenance (A).....	N 76
Voice communication system using light rays (A).....	N 65	COOK, N. H. Criticism of radioactive tool life testing (A).....	Je 74	CREEP OF MATERIALS. See also COLUMNS, METAL CREEP, STRESSES AND STRAINS Determination of the effect of creep in plastics on bolted plastic-metal assemblies (A).....	S 78
COMPOSITE MATERIALS Composite materials (A).....	O 69	Mechanism of chip curl and its importance in metal cutting (A).....	Ap 83	Heat transfer, applied mechanics, and creep conferences focus on basic mechanical engineering.....	O 95
Constructing composite material.....	D 27	COOK, R. H. Hydrogen damage to no. 2 boiler at Armstrong power station (A).....	D 62	Solution of viscoelastic stress analysis problems using measured creep or relaxation functions (A).....	Ap 81
COMPRESSORS. See also DIFFUSERS, VORTICES Analytical and experimental investigation of multiple disk pumps and compressors (A).....	My 83	COOK, W. General analytical approach for complex redundant structures (A).....	Ag 62	CREMERS, C. J. Hot-wire measurements of turbulence correlations in a triangular duct (A).....	Je 76
Compressor cylinder pressure measurements (A).....	Je 66	COOKE, RUSSELL ANDREWS Obituary.....	Ja 120	CRESPAP, MARK WINFIELD Obituary.....	N 112
Compressor station design and performance (A).....	S 74	COOLEY, J. W. Dynamics of externally pressurized sliders with incompressible and compressible films (A).....	D 65	CRESS, H. A. Determining design feasibility (A).....	O 71
Correlation of Reynolds-number effect for a family of small centrifugal compressors (A).....	Ag 65	COOLING. See HEAT TRANSFER COOLING SYSTEMS. See also VORTEX TUBES Locomotives: a new design approach to engine cooling (D).....	Ja 79	CRITICAL PATH METHOD Critical path method of scheduling for tank construction (A).....	D 71
Gas compressor indicating—purpose, methods, results (A).....	S 72	COOPER, GEORGE HENRY Obituary.....	D 96	CRITICAL SPEEDS. See SHAFTS, VIBRATION CROM, W. H., JR. Metric system: should we convert? (D).....	F 86
Gas compressor testing using modern recording oscillographic equipment (A).....	S 74	COOPER, PAUL Application of pressure and velocity criteria to the design of a centrifugal pump impeller and inlet (A).....	Ag 72	CROSBETT, J. W. Nickel-steel tank tests at minus 320.....	Jl 40
Gas engine-driven compressor bearing evaluation (A).....	S 72	COPLAN, LOUIS P. Coking stoker design and application (A).....	F 85	CROSBLEY, F. R. E. Contribution to Gruebler's theory in the number synthesis of plane mechanisms (A).....	My 88
Internal bearings in centrifugal gas compressors (A).....	Je 75	COPPER AND COPPER ALLOYS Copper alloys in design.....	F 34	CRUM, ROYCE LEY Obituary.....	D 96
Modernizing existing pipeline integral engine-compressor units (A).....	D 71	CORROSION. See also SHAFTS Fluid for corrosion coating and cutting (A).....	Ap 74	CRYOGENICS. See LOW-TEMPERATURE RESEARCH	
Techniques used in gas-compressor indicating and data analysis (A).....	Je 66	Preparation and use of cement-lined pipe (A).....	Ja 72	CUMMING, J. D. Some observations on the mechanics of orthogonal cutting of Delrin and Zytel plastics (A).....	O 76
Today's balanced-pressure indicator—its application (A).....	Je 66	Wrap up your rust problems (A).....	Ag 54	CUNNINGHAM, JAMES DALTON Obituary.....	O 110
Typical performance characteristics of gas turbine radial compressors (A).....	Jl 59	CORROSION RESISTANCE. See METAL FINISHING COST ACCOUNTING New deal in depreciation (D).....		CURRY, MALCOLM Obituary.....	N 112
COMPUTERS. See also ENGINEERING SYSTEMS, GAS PIPELINES, INVENTORIES, MACHINE DESIGN, MANUFACTURING, NUMERICAL CONTROL, PETROLEUM REFINING, PIPELINES, SHELLS, STEAM CONDENSERS Automatic network analog computer for the solution of the biharmonic equation (A).....	Je 77	COST ANALYSIS Cost reduction: dollars per hour (D).....	Mr 82	CURTIS, B. D. Performance index and overall status from line of balance (A).....	Ap 79
		Estimating petrochemical plant costs from flow sheets (A).....	D 70	CURTIS, WILLIAM EDWARD Obituary.....	Mr 111
		COSTELLO, FREDERIC A. Evaluation of several methods of approximating solutions to the heat conduction equation (A).....	N 82	CUSHING, CHARLES R. Shipboard gantry cranes (A).....	D 72
				CYLINDERS. See FILMS, FLOW OF FLUIDS, ROLLING, SHELLS	
				CYE, W. H. Use of Canadian crudes in locomotive diesel engines (A).....	Jl 70

(A) denotes Abstract; (AC) Author's Closure;
(BR) Book Review; (C) Correspondence;
(D) Discussion; (Ed) Editorial

DACHILLE, FRANK Contributions to calibration of high-pressure systems from studies in opposed-anvil apparatus (A).....	F	76	DEN HARTOG, J. P. Selbsterregte Schwingungen an Werkzeugmaschinen (BR).....	Mr	84	DORAN, D. G. Measurement of shock pressures in solids (A).....	F	83
DACOSTA, M. Temperature distribution in a cylindrical rod moving from a chamber at one temperature to a chamber at another temperature (A).....	O	76	DEPRECIATION. See COST ACCOUNTING			DRAFTING PRACTICE Drawing-board typewriter (A).....	F	72
DAILY, JAMES WALLACE Biography.....	S	101	DE RUMTE, JOHN A., JR. Crushing of a tube between rigid plates (A).....	O	78	More efficient filing and printing of drawings (A).....	N	78
DAMENWOOD, GLENN Automatic engine indicator and analyzer (A).....	S	73	DESIGN. See MACHINE DESIGN, PRODUCT DESIGN			New methods of making and handling drawings (A).....	O	70
DANFORTH, C. E. Effect of high-stress-amplitude fatigue damage on the endurance properties of high-performance stainless-steel and titanium alloys (A).....	My	86	DETERGENTS. See SEWAGE TREATMENT			Perspective drawings easily made (A).....	Ja	54
DARMODY, W. J. Accuracy analysis of measurements (A).....	Je	74	DEVAN, EDWARD ALOYSIUS Obituary.....	D	96	DRAKE, C. WILLIAM Management looks at distribution.....	Ap	48
DAR, Y. C. Vibrations of a rectangular plate with concentrated mass, spring, and dashpot (A).....	My	90	DEVERALL, LAMAR I. Asymmetrical thermal stress distribution in reactor fuel tubes (A).....	My	78	DRAVER, C. STARK Recipient of the Louis W. Hill Space Transportation Award.....	F	93
DATA PROCESSING Data communications systems (A).....	D	51	DEVINE, M. J. Antifriction bearing design considerations for solid lubrication (A).....	N	77	DREDGE PUMPS Effect of impeller design changes on characteristics of a model dredge pump (A).....	Ag	71
DATKO, JOSEPH Influence of physical properties on machinability (A).....	Ap	82	DEVRIES, M. F. Microscopic study of chip formation (A).....	O	76	DRESCHER, GERALD High-energy-rate forging in production (A).....	O	69
DAVID, J. High performance-low pressure turbine element (A).....	D	68	DEWENT, W. L. Mechanical switch-cart systems.....	D	34	DUCKHAMER, H. G. Some possible fixed points for calibration above 100 kilobars (A).....	F	80
DAVIDSON, T. E. Fatigue characteristics of open-end thick-walled cylinders under cyclic internal pressure (A).....	My	85	DEWILDE, E. F. Analysis of factors influencing lubricating-oil contamination in diesel engines (A).....	S	74	DUEB, W. C. The job-shop engineer (D).....	Ap	87
DAVIS, E. A. Extension of iteration method for determining strain distributions to the uniformly stressed plate with a hole (A).....	Ap	80	DEXTER, GREGORY M. Selection of ASME Fellows (C).....	D	74	DRILL PIPE. See PETROLEUM-WELL EQUIPMENT		
DAVIS, EMMETT LEROY Obituary.....	My	122	DICK, BERTRAM GALE Biography.....	F	101	DRILLING. See also PETROLEUM-WELL EQUIPMENT Deep-hole spark drilling (A).....	F	74
DAVIS, OSCAR ALLEN Obituary.....	Mr	111	DICK, I. B. Experiences with hydrogen embrittlement in the Consolidated Edison system (A).....	D	63	DRIVES Variable speed transmission (A).....	Ap	73
DAVIS, W. KENNETH Energy conversion—engineers make it work.....	Mr	38	DICKINSON, R. W. High performance sodium graphite reactor power plant (A).....	My	80	What do roller-chain ratings mean? (A).....	Mr	76
DEACON, WALTER K. Piston engines are reborn for space power (A).....	Mr	73	DICTIONARIES Russian-English physics dictionary (BR).....	S	82	DROEHL, DAVID Heat transfer by natural convection of mercury in enclosed spaces when heated from below and rotated (A).....	N	79
DEAK, A. L. Procedure for calculating the packet frequencies of steam turbine exhaust blades (A).....	Je	65	DIE CASTING Magnesium investment casting (A).....	N	70	DRY DOCKS New dry dock (A).....	Jl	56
DEAN, C. F. Requirements and possible solution for lubrication of bearings and gears in a space simulator (A).....	Mr	74	DIESEL ENGINES. See also LOCOMOTIVES-DIESEL Analysis of factors influencing lubricating-oil contamination in diesel engines (A).....	S	74	DRYDEN, HUGH L. John Fritz Medal.....	Ja	100
DEBAUTER, WILLIAM LANE Obituary.....	N	112	Application of diesel engines for gas-turbine starting service (A).....	S	74	DUBENSKY, R. G. Control of shaft vibrations at hypercritical speeds (A).....	O	71
DEBUS, KURT H. Launching method for tomorrow's rockets.....	S	41	The big reciprocating engine—how to assure its future.....	F	46	DUCOFFE, A. L. Problem of pneumatic lag. Part 1. steady-state flow in a tubing system (A).....	Jl	63
DECKER, J. M. Experience with aluminum condenser tubes at St. Clair Power Plant (A).....	My	81	Binary fluid waste-heat recovery cycle for engine and turbine prime movers (A).....	S	75	Problem of pneumatic pressure lag. Part 2. unsteady flow in a tubing system closed at one end (A).....	Jl	63
DE FLORES, LUIS Obituary.....	Mr	111	Burning of heavy fuel in a medium-speed, high bmeq engine (A).....	S	74	DUDLEY, J. C. Visual and photographic study of the inception of vaporization in adiabatic flow (A).....	Ag	70
DEFOAMERS. See SILICONES			Diesel cylinder lubricator (A).....	D	61	DUFFIE, J. A. Optimization of focusing solar-collector design (A).....	Jl	65
DEFORMATION. See also BEAMS, STRESSES AND STRAINS Elastic-plastic deformation of a single grooved flat plate under longitudinal shear (A).....	My	89	Investigations concerning wear of inlet-valve seats in diesel engines (A).....	S	72	Selective radiation properties of particulate coatings (A).....	Jl	64
Finite deformations of a rigid perfectly plastic arch (A).....	Ap	81	New marine transmission for diesel engines in the 800-hp range (A).....	S	73	Study of a solar air conditioner.....	Ag	31
DEISLER, R. G. Diffusion approximation for thermal radiation in gases with jump boundary condition (A).....	O	77	Turbocharging a small medium-speed, two-cycle opposed-piston diesel engine (A).....	S	74	DUNCAN, S. F. Analysis of gas-turbine wear data for required air-cleaner performance (A).....	Ag	68
DE JONGE, A. E. RICHARD Are we drowning in complexity? (D).....	Ap	88	Using the fuel-air ratio as a basis for rating of turbocharged 4-cycle diesel engines (A).....	S	74	DUNDURS, J. Concentrated forces in an elastically embedded disk (A).....	N	86
DELABAR, MARTIN THOMAS Obituary.....	F	110	Vibration and noise of diesel engines (A).....	S	72	Flexure by a concentrated force of the infinite plate on a circular support (A).....	My	90
DELPE, J. M. Warehouse automation.....	Ap	51	DIFFUSERS On the flow in the vaneless diffuser of a centrifugal compressor (A).....	Ja	74	DUNKLE, R. V. Geometric mean beam lengths for radiant heat-transfer calculations (A).....	Mr	77
DELLACANONICA, O. G. Are we drowning in complexity? (D).....	Ap	88	DIFFUSION THERMO. See BOUNDARY LAYER			DUNN, R. A. Redetermination of the freezing pressure of mercury using improved apparatus and technique (A).....	F	82
DELORENZI, OTTO Obituary.....	D	96	DILLARD, J. K. The utilities trend (AC).....	Je	80	DUNNELL, A. J. Elastoplastic stress and strain distribution in a finite plate with a circular hole subjected to unidimensional load (A).....	Ap	81
DEMETRI, E. P. Condensation of metal vapors during rapid expansion (A).....	Je	67	DINGWELL, I. W. Digital computer program for the general axially symmetric thin-shell problem (A).....	Ja	74	DUST COLLECTORS American Petroleum Institute engineering reports on removal of particulate matter from gaseous wastes (A).....	Ja	72
DEMSKI, R. J. Is coal the fuel for MHD power?.....	O	38	DIREX Concentrated forces in an elastically embedded disk (A).....	N	86	Electrostatic precipitators in Australia (A).....	O	67
			Nonlinear transverse vibrations of a spinning disk (A).....	N	87	DUST SEPARATORS. See AIR FILTERS		
			DISTRIBUTION. See MARKETING			DUSTERBERY, JOHN C. Multipurpose research laboratory for flight simulation (A).....	Ag	65
			DITMARS, WALTER EARL Obituary.....	D	96	DUST, A. F. Coal slurry-firing at the Werner Station (A).....	Ja	69
			DOCKS Floating docks for busy ports (A).....	F	74	DWORKI, JURAJ High-speed rotor suspension formed by fully floating hydrodynamic radial and thrust bearings (A).....	Ag	67
			DODGE, E. R. Cavitation in an impeller—looking from the inside out (A).....	Ag	71			
			DOHRMANN, R. J. General procedure for analyzing thick shells of irregular shapes for mechanical and thermal loading (A).....	Mr	75			
			DOMMARON, DANIEL O. (author) Principles underlying systems engineering (BR).....	Ag	77			
			DONNELL, LLOYD H. Biography.....	O	106			
			Elected Fellow of ASME.....	O	106			

(A) denotes Abstract; (AC) Author's Closure; (BR) Book Review; (C) Correspondence; (D) Discussion; (Ed) Editorial

Dwyer, O. E.	
Heat transfer to mercury flowing in-line through a bundle of circular rods (A)	N 80
Dye, John H.	
Forklifts and their applications (A)	N 78
DYNAMICS. See also SPHERES	
Asymptotic stability of a time-delayed diffusion system (A)	85
Dynamics of a vehicle containing moving parts (A)	Ja 74
Impulsive motions (A)	Ja 74
On the parametric excitation of a dynamic system having multiple degrees of freedom (A)	O 79
E	
EARTH SATELLITES. See also PHOTOGRAPHY	
Change in Tiros design (A)	Ag 55
Engineering an earth satellite	My 48
Ion engine keeps orbits perfect (A)	Ja 52
Satellite oscillation damper (A)	S 62
600-ft rod controls satellite (A)	63
Mr 56, (correction) S	63
Space hitchhiker (A)	D 56
Steadfast spectator (A)	D 56
EATON, LYLE	
Components and electropneumatic servos (A)	O 69
ERDON, HUBERT G.	
Biography	S 101
Elected Fellow of ASME	S 101
ECKEL, OLIVER C.	
Gas turbine silencers (A)	Jl 58
ECKERT, E. R. G.	
Effect of diffusion thermoelectric and thermal diffusion for helium injection into plane and axisymmetric stagnation flow of air (A)	N 80
Effect of surface roughness on the total hemispherical and specular reflectance of metallic surfaces (A)	O 76
Friction and heat-transfer measurements to turbulent pipe flow of water (pr = 7 and 8) at uniform wall heat flux (A)	N 84
Heat transfer and skin friction for turbulent boundary-layer flow longitudinal to a circular cylinder (A)	Ja 73
Hot-wire measurements of turbulence correlations in a triangular duct (A)	Je 76
Measurements of heat transfer from a cylinder with air injection into a turbulent boundary layer (A)	N 80
EDGAWTON, LEWIS STEARNS	
Obituary	Je 106
EDITORIALS	
Frederick S. Blackall, jr.—1896-1963	S 33
The crushed commuter	N 27
An educated guess	D 19
Engineers in government	D 19
Engineers—the shrinking violets	Jl 21
Future engineers	Mr 25
Indians or chiefs?	Ap 25
A national academy	Jl 21
The research dilemma	Je 21
R. B. Smith, the international engineer	Je 21
The task ahead	O 25
They're talking about	Ja 21, F 25, Mr 25
To categorize or not to categorize	Ag 25
EDUCATION	
Audio-visual concepts in industrial manufacturing (A)	Ap 78
Downward trend in Freshman engineering enrollment continues	F 92
An educated guess (Ed)	D 20
Educating tomorrow's engineers	D 20
ECPD calls for aid in nationwide engineering guidance program	Mr 105
ECPD to educators: revise your tactics (A)	D 79
\$5 million Sloan gift makes possible M.I.T. Center for advanced engineering study	85
Freeman Fellowship for study or research in hydraulics	D 90
Future engineers (Ed)	Mr 25
Indians or chiefs? (Ed)	Ap 25
JETS nationwide program seeks body and girls with talent for engineering	Mr 105
Newly established Sloan loan fund to benefit engineering programs at two universities	Ja 86
News and Notes	Je 88, O 22
Organizing complexity	Jl 22
Programmed texts a success (A)	F 68
Qualitative educational requirements for Air Force officers (A)	O 73
Rensselaer makes drastic revisions in curriculum to educate engineers	Je 87
Science toys make future engineers	N 46
Student attrition, is it undermining our nation's engineering manpower?	My 101
Talent—the intangible necessity (A)	D 86

(A) denotes Abstract; (AC) Author's Closure; (BR) Book Review; (C) Correspondence; (D) Discussion; (Ed) Editorial

EDUCATION (continued)	
Teaching engineering design (A)	Mr 64
To categorize or not to categorize (Ed)	Ag 25
Training aides to engineers	O 92
U. S. Office of Education-ASEE report increase in engineering enrollments and degrees	Ap 92
EDWARDS, J. A.	
Free convection and radiation heat transfer from fin-on-tube heat exchangers (A)	Ja 76
EGGE, EDWIN GUSTAVE	
Obituary	Je 106
EGGLESTON, D.	
Some applications of the maximum principle to second-order systems, subject to input saturation, minimizing error, and effort (A)	Jl 68
EICHENBERG, R.	
Design of high-pressure integral and welding neck flanges with pressure-energized ring joint gaskets (A)	D 69
EISENSTADT, R.	
Fatigue characteristics of open-end thick-walled cylinders under cyclic internal pressure (A)	My 83
ELASTICITY. See also STRESSES AND STRAINS	
Application of numerical mapping to the Muskhelishvili method in plane elasticity (A)	O 80
ELASTOMERS. See CONSTRUCTION MATERIALS, IMPACT, RUBBER, SEALS	
ELASTOPLASTICITY. See STRESSES AND STRAINS	
ELDEBS, DANIEL S.	
Microminiaturization assembly techniques (A)	O 68
ELDRIDGE, C. L.	
Gas-engine total energy package—the University Plaza Shopping Center utility plant (A)	S 73
ELECTRIC DISCHARGE. See METAL FORMING	
ELECTRIC MOTORS	
Longer motor life (A)	My 66
ELECTRIC THRUST DEVICES. See SPACE VEHICLES	
ELECTRICAL EQUIPMENT	
Bent pin problem electrical connectors (A)	F 66
Speed control of precise power generating sets (A)	Je 66
ELECTRICAL FAILURES	
Avoiding electrical failures caused by mechanical operation (A)	O 71
ELECTRICAL RESISTIVITY	
Calcite-aragonite transition and the calibration of a belt-type apparatus between 15 and 35 kb 700 to 1400 C (A)	F 78
Electrical resistivity of iron from 20 to 1250 C at static pressures from 25 to 95 kilobars (A)	F 78
ELECTROCHEMICAL MACHINING. See METAL CUTTING	
ELECTROLYTIC GRINDING. See GRINDING	
ELECTROMAGNETISM. See PUMPS	
ELECTROSPARK MACHINING. See DRILLING	
ELECTROSTATIC PRECIPITATORS	
Industrial electrostatic precipitation (BR)	D 77
ELEY, MYRLE C.	
Contaminated fuel testing of engine controls to MIL-E-5009B using the USN aeronautical engine laboratory technique (A)	Ag 69
ELLENBERGER, WILLIAM J.	
Great engineers (C)	Ap 88
ELLIS, A. T.	
Longitudinal strain pulse propagation in wide rectangular bars—part 1—theoretical considerations (A)	Ap 80
Longitudinal strain pulse propagation in wide rectangular bars—part 2—experimental observations and comparisons with theory (A)	Ap 80
ELLIS, D.	
Boundary layer and transition characteristics of a rotating cone (A)	Je 69
ELLIS, GAYLORD O.	
Study of induced vorticity in centrifugal compressors (A)	Je 71
ELROD, H. G. JR.	
Theory of pulsating flow in conical nozzles (A)	Je 77
EL-SADEN, M. R.	
Nernst generator, a solid-state, thermomagnetic direct-energy converter (A)	Ja 75
ELSENBERG, JOHN W.	
Obituary	D 96
ELSTON, CHARLES W.	
Biography	S 101
Elected Fellow of ASME	S 101

ELWELL, R. C.	
For a nuclear loop: gas bearings (D)	O 83
ELY, SUMNER BOYER	
Obituary	Je 107
EMERITMENT. See BOILER CORROSION	
EMMONS, D. L.	
Effects of selected gas stream parameters and coolant properties on liquid film cooling (A)	N 81
EMPLOYMENT	
The job-shop market and the engineer	F 103
1962 demand for engineers and scientists 27 percent higher than 1961	Mr 95
The team: scientist, engineer, technician	Mr 26
ENERGY. See POWER	
ENERGY CONVERSION	
Energy Conversion Professional Division planned for ASME	Ag 85
Energy conversion (BR)	Je 81
Energy conversion—engineers make it work	Mr 38
ENGEL, F. V. A.	
New interpretations of the discharge characteristics of measuring orifices. An approach to improved accuracy (A)	Jl 71
ENGINE INDICATORS	
Automatic engine indicator and analyzer (A)	S 73
ENGINEERING. See also EDUCATION, WOMEN IN ENGINEERING	
Are we drowning in complexity?	F 26
Content two—a problem in machine design	Jl 34
Definition of engineer (C)	O 82
Definition of engineering (C)	Jl 74
Design and the education of mechanical engineers (BR)	My 93
Energy conversion—engineers make it work	Mr 38
An exciting challenge: the practice of mechanical engineering (as presented on television)	S 93
Meta-engineering: new word coined to describe modern complex engineering (A)	S 86
A national academy (Ed)	Jl 21
National academy of engineering established	Je 94
Obsolete engineering and the payoff (A)	D 84
Organizing complexity	Jl 22
ENGINEERING DRAWINGS. See DRAFTING PRACTICE	
ENGINEERING EDUCATION. See EDUCATION	
ENGINEERING FOUNDATION	
Engineering Foundation gets \$1/4 million endowment	Ap 97
ENGINEERING MANPOWER COMMISSION	
Two-year survey shows engineering salary level on the rise (A)	Ap 91
ENGINEERING PROFESSION	
Board for Engineering Cooperation submits report	Ap 93
Building a profession	Jl 99
Keeping pace with the scientific age	O 26
Professional achievement for engineers and scientists (BR)	N 93
"Unwritten Laws of Engineering" still available from ASME Order Department	N 114
Your learned profession	Ap 42
ENGINEERING SOCIETIES	
Decisions that face ASME (C)	Ap 86
Meetings of other societies	Ja 113, F 96, Mr 97, Ap 98, My 104, Je 92, Je 93, Jl 83, Ag 81, S 89, O 94, N 99, D 85
ENGINEERING SYSTEMS	
Analysis and synthesis of engineering systems by digital-computer programming (A)	Ja 68
ENGINEERS. See also EDUCATION, EMPLOYMENT	
A call to citizenship	Ap 26
The engineer in field service (D)	Ja 78
Engineer or ingenieur (C)	Je 81
Engineering concepts in line management (A)	D 72
Engineers in government (Ed)	D 19
Engineer's role in profitability analysis (A)	70
Engineers—the shrinking violets (Ed)	Jl 21
For 21st century: a new breed of engineers? (A)	Je 86
Future engineers (C)	My 93
The job-shop market and the engineer	F 103
Management development program for engineers (A)	D 72
Managing creative scientists and engineers (BR)	S 81
The obsolete engineer	O 28
The team: scientist, engineer, technician	Mr 26
EJC	
Abstracting and indexing courses made available	O 92
ECPD calls for aid in nationwide engineering guidance program	Mr 105

- FOSTER-PEGG, RICHARD W.**
 Procedure for solution of gas-turbine and other combustion heat-balance problems with predetermined airflow (A).....Jl 60
- FOUNDATIONS**
 Dynamical compliance of rectangular foundations on an elastic half-space (A).....N 87
 Foundations for high-speed machinery (A).....Je 71
FOUNDRY PRACTICE. See also DIE CASTING
 Continuous casting in operation (A).....Ag 51
- FOX, J. C.**
 Startup experience with the Plutonium recycle test reactor (A).....My 80
- FOX, JOHN H.**
 Decisions that face ASME (C).....Ap 86
- FRACURE.** See METAL FAILURES
- FRANK, DAVID S.**
 Obituary.....Ja 120
- FRASER, WALTER GREEN, JR.**
 Obituary.....D 97
- FREEMAN, ROBERT S.**
 Continuously operating carbon-arc lamp for solar simulation (A).....Jl 64
- FRENCH, ROBERT L.**
 Role of analysis in the evolution of a liquid rocket start system (A).....Jl 61
- FREQUENCY RESPONSE.** See GRAPHICAL METHODS
- FREUDENSTEIN, F.**
 Geared five-bar motion
 Part 1—Gear ratio minus one (A).....Je 77
 Part 2—Arbitrary commensurate gear ratio (A).....Je 77
 Synthesis of path-generating mechanisms by numerical methods (A).....My 88
- FREY, CARL**
 Engineering salaries.....Je 22
- FRETBERG, R. H.**
 Nuclear stations in operation—Shipping-port (D).....Ja 78
- FRICTION**
 Brief history of friction. Part one.....S 55
 Part two.....S 33
 Torque capacity of friction devices with nonlinear frictional elements (A).....Jl 66
 Variable-speed frictionometer for plastics, rubbers, metals, and other materials (A).....Je 72
- FRIED, E.**
 Thermal joint conductance in a vacuum (A).....Jl 59
- FRINK, D. W.**
 Synthesis of concepts in the design method (A).....O 70
- FRITCH, J.**
 Stress-strain distribution during transient heating of a transversely anisotropic material (A).....My 89
- FRITSCH, C. A.**
 Free convective heat transfer to supercritical water experimental measurements (A).....Mr 79
- FRITZ, W. A., JR.**
 Development and evaluation of a supercharged steam generating system (A).....Ap 76
- FRYLING, GLENN R.**
 Industrial electrostatic precipitation (BR).....D 77
- FUCHS, I. J.**
 Major causes of product failure and their prevention (A).....O 60
- FUEL CELLS.** See also THERMOELECTRICITY
 Auxiliary power-generating system for a manned space laboratory (A).....Ag 64
 The fuel cell at home (A).....S 62
 Fuel cell works on natural gas (A).....Ap 62
 "Fuel cells and related research"; available from O.T.S. Mr 96
 Fuel cells: the role of a designer in a new art (A).....N 77
- FUEL INJECTION.** See BLAST FURNACES
- FUELS.** See also BLAST FURNACES, LOCOMOTIVES—DIESEL, MAGNETOHYDRODYNAMICS, ROCKET FUELS
 Burning of heavy fuel in a medium-speed, high bmeep engine (A).....S 74
 Contaminated fuel testing of engine controls to MIL-E-5009B using the USN aeronautical engine laboratory technique (A).....Ag 69
 Fuels today. Part one.....Jl 38
 Part two.....F 38
 Smog and grog (A).....My 68
 Peat power in Ireland (A).....D 61
- FULLER, FRANK H.**
 The human machine—work & environment.....D 22
- FUNK, JAMES E.**
 Poppet valve stability (A).....Je 71
- FULLER, DUDLEY D.**
 Richards Memorial Award.....Ja 101
- FURNACES.** See BOILER FURNACES, MAGNETOHYDRODYNAMICS
- FURNAS, C. C.**
 Organising complexity.....Jl 22
- FUSCO, J. V.**
 New elastomers for the construction industry (A).....Je 72
- G**
- GAHNKIN, VALENTINE GREGORY**
 Obituary.....Ja 121
- GAITHER, PAUL H.**
 Designing high-performance electromechanical services (A).....O 68
- GALLE, EDWIN G.**
 Obituary.....My 122
- GALLINGER, C. T.**
 Safe new method for the internal cleaning of process equipment and pipelines (A).....S 75
- GALLOWAY, E. E.**
 Hydrogen damage in a 1250-psi boiler (A).....D 62
- GALLOWAY, WILLIAM J.**
 Noise control of a jet engine converted to a fixed-plant installation (A).....Ag 69
- GALLUZZO, JOSEPH F.**
 Simplified flow-ratio computing and control (A).....D 70
- GAMBLE, CARY BRECKENRIDGE**
 Obituary.....D 97
- GARDNER, G. C.**
 Gravity hopper design (D).....Jl 76
 Viscous flow of a liquid over a rotating surface with gas drag (A).....Ja 74
- GARLAND, CLAUDE MALLOY**
 Obituary.....F 110
- GARRISON, C. J.**
 Vortex formation and resistance in unsteady flow (A).....Mr 80
- GAS LUBRICATION.** See BEARINGS
- GAS PIPELINES**
 Algorithm for simulation of gas-transmission systems (A).....Ja 69
 Sonic leak finder (A).....Ap 59
- GAS TRANSMISSION**
 Optimization of gas-transmission system operations and expansions using simulation techniques (A).....Je 65
- GAS TURBINES.** See also AIR FILTERS, COMBUSTION, HEAT-EXCHANGER EQUIPMENT, SHIPS
 Analog computer study of the transient performance of the General 600-hp regenerative gas turbine (A).....Ag 68
 Analysis of gas-turbine wear data for required air-cleaner performance (A).....Ag 68
 Application of diesel engines for gas-turbine starting service (A).....S 74
 Application of jet gas turbines to pipeline pumping service (A).....D 71
 Binary fluid waste-gas recovery cycle for engine and turbine prime movers (A).....S 75
 Coal-burning gas turbine (A).....Jl 57
 Description of an operating closed-cycle helium gas turbine (A).....Ag 68
 Experience with mobile gas turbines (A).....Ag 69
 Gas turbine silencers (A).....Jl 58
 Heat recovery from gas-turbine exhaust (A).....D 68
 High-speed suspension formed by fully floating hydrodynamic radial and thrust bearings (A).....Ag 67
 International Congress on combustion engines to be held in London, England, April, 1965.....Mr 92
 Noise control of a jet engine converted to a fixed-plant installation (A).....Ag 69
 Operating experiences and data of two 20,000-kw gas turbines at El Convento (A).....Jl 58
 Operating results with gas turbines of large output (A).....Jl 60
 Split turbine casing cut downtime (A).....My 69
 Use of compressor-inlet prewhirl for the control of small gas turbines (A).....Ag 69
 Using jet engines to generate electricity.....Mr 40
 What to do about gas-turbine noise (A).....Ag 69
- GASES.** See also DUST COLLECTORS, FLUE GASES, SCREENS
 Diffusion approximation for thermal radiation in gases with jump boundary condition (A).....O 77
- GASKETS**
 Design of high-pressure integral and welding neck flanges with pressure-energized ring joint gaskets (A).....D 69
- GASOLINE PLANTS.** See PETROLEUM INDUSTRY
- GASTON, ERNEST CHARLES**
 Biography.....S 102
 Elected Fellow of ASME.....S 102
- GATES, ROBERT M.**
 Obituary.....Ja 123
- GATTS, R. R.**
 Cumulative fatigue damage with progressive loading (A).....My 85
- GAUDET, FREDERICK J.**
 Manpower wastage.....Jl 38
- GAYLORD, EBER W.**
 Content two—a problem in machine design.....Jl 34
 Relation between the rubbing interface temperature distribution and dynamic thermocouple temperature (A).....D 66
- GEARS**
 Analysis of an improved planetary gear-transmission bearing (A).....D 64
 Gear metrology laboratory (A).....S 66
 Gearing for higher operating speeds (A).....N 78
 Lead tester for gears (A).....Ja 66
 New road to index error evaluation (A).....Jl 67
 Requirements and possible solution for lubrication of bearings and gears in a space simulator (A).....Mr 74
- GERHART, B.**
 Transient forced convection from a flat plate subjected to a step energy input (A).....N 79
- GELB, GEORGE**
 Heat transfer by natural convection of mercury in enclosed spaces when heated from below and rotated (A).....N 79
- GEM.** See GROUND EFFECT MACHINES
- GOEPFERT, FREDERICK OTTO**
 Obituary.....D 97
- GEORGIAN, J. C.**
 Binary fluid waste-heat recovery cycle from engine and turbine prime movers (A).....S 75
- GERMAN LANGUAGE**
 Streamlined introduction to technical German (A).....Jl 66
- GETZEN, JOHN EDWIN**
 Obituary.....N 113
- GIARDINI, A. A.**
 Study of stress homogeneity in cylindrical cavities at high pressures (A).....F 77
- GIBSON, GEORGE**
 The utilities trend: growth and pooling (D).....Je 80
- GIBSON, W. L.**
 Measurements of auto-oscillation in a hydroelectric supply tunnel and penstock system (A).....Je 70
- GIERING, J.**
 Boundary layer and transition characteristics of a rotating cone (A).....Je 69
- GILBERT, C. A.**
 Laboratory in space.....N 56
- GILBRETH, LILLIAN M.**
 Accolade for the president (C).....O 82
- GILL, EDWARD HALL**
 Obituary.....Mr 111
- GILL, JACK H.**
 Gas engine total energy economics (A).....S 73
- GINNA, ROBERT E.**
 Atomic crossroads—U. S. A.....Ja 36
- GIOLA, ROSARIO**
 Value engineer during the preparation of proposals (A).....Je 74
- GLASS**
 Engineering with glass.
 Part one. What is glass?.....Mr 30
 Part two. What can glass do?.....Ap 30
 Glass filters for helium (A).....F 61
 Heat-shielding window glass (A).....Ap 64
 Influence of the equilibrium dissociation of a diatomic gas on Brayton-cycle performance (A).....Je 77
 Variable color glass (A).....Ag 53
- GLEN, J.**
 Shape of creep curves (A).....Jl 69
- GLENNAN, T. KEITH**
 Honorary Member of ASME.....Ja 100
- GOLAND, MARTIN**
 Future pathways for management.....Je 30
 Principles underlying systems engineering (BR).....Ag 77
- GOLD PLATING**
 Simplified gold plating (A).....My 64
- GOODIER, J. N.**
 Elastic cylindrical shell under nearly uniform radial impulse (A).....N 87
- GOODMAN, THOMAS P.**
 Receives Melville Medal.....Ja 101
- Streamlined introduction to technical German (A).....Jl 66**
- GOODSON, R. E.**
 Simplification of hydraulic line dynamics by use of infinite products (A).....Je 78

GOODWIN, P. M. Composite materials (A).....O	69	HAGE, SIGURD DANIEL Obituary.....Jl	98	HEAT EXCHANGE EQUIPMENT (continued)	
Constructing composite material.....D	27	HAINES, EDWARD MUNKROE Obituary.....D	97	Transient heat transfer in a vapor-heated exchanger with arbitrary time-wise- variant flow perturbation (A).....N	79
GORDON, ARTHUR Packaging the passenger—design for col- lision project survival car II (A).....Ap	78	HALCOMB, J. J. System—PERT in product design.....My	35	Transient response of gas turbine plant heat exchangers. Additional solution for regenerators of the periodic-flow and direct-transfer types (A).....Jl	88
GORMLEY, J. F. Cost reduction: dollars per hour (AC).....Mr	82	HALLIGAN, D. H. Site requirements for large nuclear sta- tions (A).....My	80	Vehicular gas turbine periodic-flow heat exchanger solid and fluid temperature distributions (A).....Ag	69
GORTON, C. W. Viscous fluid flow under the influence of a resonant acoustic field (A).....Mr	77	HALSEY, JOHN J. Package contents challenge (A).....Je	71	HEAT-INSULATING MATERIALS. See also SAFETY ENGINEERING, SPACE VEHICLES New research findings on thermophysical properties and uses of insulating ma- terials (A).....O	69
GOTTENBERG, W. G. Dynamic response of a solid, viscoelastic sphere to translational and rotational excitation (A).....N	89	HAMMITT, F. G. Observations on cavitation damage in a flowing system (A).....Je	69	HEAT RATE. See POWER PLANTS—STEAM	
GOVERNMENT Management of defense R & D (A).....D	72	HANDWERK, WILLIAM B. Transient internal natural convection heating and cooling of closed, verti- cal, cylindrical vessels (A).....My	78	HEAT RECOVERY. See GAS TURBINES	
GOVERNORS Now: electric governors for hydroturbinesAp	53	HANSON, C. M. Laboratory in space.....N	56	HEAT TRANSFER. See also BOILING, BOUNDARY LAYER, WATER Boiling heat transfer with cryogenic fluids at standard, fractional, and near-zero gravity (A).....N	81
Power test code for speed-governing systems for internal-combustion engine- generator units.....F	105	HANSON, K. L. Survey of techniques for predicting the space output of photovoltaic devices (A).....Jl	64	Combined radiation and convection in an asymmetrically heated parallel plate flow channel (A).....O	76
Roadway speed limiter tests at Rocky Reach (A).....Je	70	HARDY, A. A. Recent improvements in sucker-rod joint design (A).....Ja	72	Comparison of five methods of calculating aerodynamic stagnation-point heat transfer at velocities of 25,000 to 40,000 fps (A).....O	80
GRACE, WILLIAM A. Obituary.....N	113	HARDY, P. E. New elastomers for the construction industry (A).....Je	72	Design-oriented optimization of simple tapered radiating fins (A).....Mr	76
GRAPHICAL METHODS. See also HEAT TRANSFER Amplitude frequency response analysis and synthesis of unfactored trans- fer functions (A).....Je	78	HARKER, R. J. Torque capacity of friction devices with nonlinear frictional elements (A).....Jl	66	Determination of forced-convection sur- face-boiling heat transfer (A).....N	82
Graphical solution of quasi-one-dimen- sional foam flows (A).....N	84	HARLOW, JAMES H. Biography.....Ag	92	Diffusion—approximation for thermal radiation in gases with jump boundary condition (A).....O	77
GRATES. See INCINERATORS		HARLOW, JAMES H. Nominated for Vice-President.....Ag	92	Effect of electrostatic fields on free- convection heat transfer from flat plates (A).....O	77
GRAVITY. See LOW-TEMPERATURE RE- SEARCH		HARRINGTON, FERNIS T. Biography.....Ja	116	Effect of small cross flow and surface-tem- perature variation on laminar free con- vection along a vertical plate (A).....My	90
GRAT, R. W. Use of computers in numerical control (A).....S	77	HARRINGTON, R. T. Elected Fellow of ASME.....Ja	116	Effect of wall electrical conductance on magnetohydrodynamic heat trans- fer in a channel (A).....Je	68
GRAT, WILLIAM GEORGE Obituary.....Je	107	HARRIS, FORD WHITMAN Obituary.....D	97	Effects of oscillation on free convection from a vertical finite plate (A).....N	83
GREGORY, C. E. Modification and calibration of a tetra- hedral anvil apparatus (A).....F	81	HARRIS, T. A. Analysis of an improved planetary gear- transmission bearing (A).....D	64	Effects of selected gas stream parameters and coolant properties on liquid film cooling (A).....N	81
GRIFFITH, P. Prediction of low-quality boiling voids (A).....N	79	HARRY, E. C. Compressor cylinder pressure measure- ments (A).....Je	66	Emission of radiant heat from small-scale pulverized-coal flames (A).....N	83
GRINDER Portable grinder (A).....N	67	HARTWELL, ROBERT W. Nonnuclear testing at the Enrico Fermi atomic power plant (A).....Ja	68	Evaluation of several methods of ap- proximating solutions to the heat con- duction equation (A).....N	82
GRINDING. See also HONING Contribution to a correlation theory for the grinding process (A).....S	78	HARVEY, A. Prestressed fiber-metal cylindrical pres- sure vessels (A).....Ag	63	Exact solution of the inverse problem in heat conducting theory and applica- tion (A).....N	82
Controlled force grinding (A).....N	62	HASINGER, S. H. Investigation of a shear-force pump (A).....My	83	Eergy of heat radiation (A).....N	79
Electrolytic grinding (A).....O	68	HASKELL, JOHN DENNIS Obituary.....F	110	Experimental investigation of free-convec- tion heat transfer from rectangular fin arrays (A).....Ja	75
Steering wheel controls grinder (A).....Ja	66	HASKIN, J. ROBERT, JR. Formulas for digital computation of cur- rent incremental heat rate (A).....Je	65	First-order perturbations of laminar free-convection boundary layers on a vertical plate (A).....Je	68
GRUB, JOHN L. Obituary.....Ja	121	HATCH, P. H. Locomotives: a new design approach to engine cooling (D).....Ja	70	Free convection and radiation heat transfer from fin-on-tube heat ex- changers (A).....Ja	76
GRUBB, R. J. Free convective heat transfer to super- critical water experimental measure- ments (A).....Mr	79	HATTIS, ROBERT ELIJAH Obituary.....N	113	Free convective heat transfer to super- critical water experimental measure- ments (A).....Mr	79
GROSSFIELD, BERNARD Flexibility analysis of three-dimensional pipeline networks (A).....D	67	HAWES, ARTHUR STEARNS Obituary.....My	122	Friction and forced convection heat- transfer characteristics in tubes with twisted tape swirl generators (A).....Je	68
GROUNDED EFFECT MACHINES Hovercraft on the Thames (A).....N	75	HAYES, R. M. Mathematical models for value engineer- ing (A).....S	76	Friction and heat-transfer measure- ments to turbulent pipe flow of water ($Pr = 7$ and 8) at uniform wall heat flux (A).....N	84
Hovercraft trials over snow (A).....Jl	56	HAYWARD, JUDSON Obituary.....My	123	Geometric mean beam lengths for radiant heat-transfer calculations (A).....Mr	77
Trio-Cell GEM (A).....Ag	56	HEAP, JAMES C. Metric system: should we convert? (D).....F	87	Graphical solution in Cartesian co- ordinates (A).....O	77
GRUBIN, CARL Dynamics of a vehicle containing moving parts (A).....Ja	74	HEAT BALANCE. See COMBUSTION		Heat, mass, and momentum transfer in- side closed tubes—experiment and theory (A).....N	83
On the steady-state response of linear systems driven by periodic inputs (A).....Jl	68	HEAT-EXCHANGE EQUIPMENT. See also HEAT TRANSFER Ceramic heat exchanger (A).....My	64	Heat-transfer and fluid friction charac- teristics of tube cluster with bound- ary layer turbulence promoters (A).....O	77
GRUNERT, ARTHUR EARL Obituary.....D	97	HEAT-EXCHANGE EQUIPMENT. See also HEAT TRANSFER Dynamic response of heat exchangers to the disturbance of wall temperature (A).....Je	78	Heat transfer and forces for free-molecule flow on a concave cylindrical surface (A).....Je	68
GUDON, MICHAEL ALLEN Obituary.....D	97	Effect of longitudinal heat conduction on periodic-flow heat exchanger per- formance (A).....Jl	58	Heat transfer and skin friction for turbu- lent boundary layer flow longitudinal to a circular cylinder (A).....Ja	73
GUBIN, HERBERT A. Critical path method of scheduling for tank construction (A).....D	71	Fluid-temperature transients in a dual- heat-exchanger system (A).....Je	78	Heat transfer applied mechanics, and creep conference focus on basic me- chanical engineering.....O	95
GULDBERG, DAN HAIGH Obituary.....Ja	121	Seven years of experience with aluminum condenser and heat-exchanger tubes (A).....My	81	Heat transfer between gas and a spherical surface with the combined action of free and forced convection (A).....Je	67
GUPTA, B. K. Load capacity of short journal bearings with oscillating effective speed (A).....D	66			Heat transfer by natural convection of mercury in enclosed spaces when heated from below and rotated (A).....N	79
GURSKI, JOSEPH Corrosion-resistant finishes (A).....O	71				
GUTMAN, A. S. Synthesis of new cam profiles from fre- quency components (A).....Jl	66				
GUY, A. M. Hydrogen damage in pure-water boiler (A).....D	63				
GYROSCOPES On the annular damper for a freely pre- cessing gyroscope (A).....O	78				
H					
HARY, GEORGE H. Metric system: yes or no? (C).....D	75				

HEAT TRANSFER (continued)

- Heat transfer to mercury flowing in-line through a bundle of circular rods (A).....N 80
- Heat transfer to the turbulent separated flow of air downstream of a step in the surface of a plate (A).....N 83
- Individual row heat transfer in a cross-flow in-line tube bank (A).....N 79
- Interaction of heat transfer by conduction, convection, and radiation in a radiating fluid (A).....Mr 76
- Laminar flow heat transfer to a gas with large temperature differences (A).....Mr 77
- Laminar heat transfer in a channel with unsteady flow and wall heating varying with position and time (A).....Ja 75
- Measurements of burnout conditions for flow of boiling water in a vertical annulus (A).....N 81
- Method of sample perturbation applied to transient heat-flow problems (A).....Ag 64
- Richard Mollier—100th anniversary.....D 38
- Monte Carlo solution of thermal transfer through radiant media between gray walls (A).....Jl 72
- Natural convection flows in parallel channel systems (A).....Je 68
- No cookbook for heat transfer experiments (C).....S 80
- Nonlinear heat transfer for the plane slab (A).....O 77
- On unsteady heat transfer of combined free and forced convection in circular tubes (A).....O 78
- Prediction of space radiator performance (A).....Ag 65
- Radiant transfer through a gray gas between concentric cylinders using Monte Carlo (A).....N 82
- Radiation heat transfer in semigray enclosures with specularly and diffusely reflecting surfaces (A).....S 78
- Steady-state heat conduction in a straight fin with variable film coefficient (A).....O 77
- Studies of the developing flow between concentric cylinders with the inner cylinder rotating (A).....O 77
- Summary of experiments on local heat transfer from the rear of bluff obstacles to a low speed airstream (A).....N 83
- Temperature distribution in a cylindrical rod moving from a chamber at one temperature to a chamber at another temperature (A).....O 76
- Thermal instability of completely confined fluids inside some particular configurations (A).....Ja 75
- Thermal joint conductance in a vacuum (A).....Jl 50
- Thermal radiation absorption in rectangular groove cavities (A).....Je 76
- Transient forced convection from a flat plate subjected to a step energy input (A).....N 79
- Transient internal natural convection heating and cooling of closed, vertical, cylindrical vessels (A).....My 78

HEAT-TREATMENT

- For a smoother shave (A).....Ap 71
- High-speed strip mill (A).....Ja 53
- Marging steels (A).....Ag 54

HEATERS. See INDUSTRIAL FURNACES

- HEINBOCKEL, J. H.
Resonant oscillations of a beam-pendulum system (A).....O 79

- HEINRICH, HERBERT WILLIAM
Obituary.....S 103

- HEINZE, F. J.
High performance-low pressure turbine element (A).....D 68

HELIUM. See GAS TURBINES, GLASS

- HENDRICKSON, R. L.
Heat recovery from gas-turbine exhaust (A).....D 68

- HENKIN, ALEXANDER
Influence of physical properties on machinability (A).....Ap 82

- HENNEY, ALEX
Optimization of damping of four configurations of a vibrating uniform beam (A).....My 86

- HENNING, WILLIAM WALLACE
Obituary.....Jl 98

- HERBICH, JOHN B.
Effect of impeller design changes on characteristics of a model dredge pump (A).....Ag 71

- HERNBORG, G.
Measurements of burnout conditions for flow of boiling water in a vertical annulus (A).....N 81

(A) denotes Abstract; (AC) Author's Closure; (BR) Book Review; (C) Correspondence; (D) Discussion; (Ed) Editorial

HERSHEY, ALBERT ERY

- Obituary.....Ag 97

- HETTINGER, CHARLES
Obituary.....D 97

- HICKS, TYLER G. (author)
Professional achievement for engineers and scientists (BR).....N 93

- HIGGINS, DON NELSON, JR.
Obituary.....N 113

- HIGGS, E. RONALD
Vibration behavior of the textile spindle (A).....Ag 66

HIGH-ENERGY FORMING. See METAL FORMING

HIGH-PRESSURE RESEARCH

- Alpha-gamma transformations in iron alloys—calibration of pressure by duplex differential thermal conductivity analysis (A).....F 79

- Calcite-aragonite transition and the calibration of a belt-type apparatus between 15 and 35 kb 700 to 1400 C (A).....F 79

- Calibration experiments in a piston-cylinder apparatus (A).....F 77

- Calibration experiments with a tetrahedral-type pressure apparatus (A).....F 80

- Calibration of a controlled-clearance pressure balance up to 8000 bars (A).....F 82

- Calibration of Bridgman anvils—a pressure scale to 125 kilobars (A).....F 76

- Contribution to calibration of high-pressure systems from studies in opposed-anvil apparatus (A).....F 78

- Correlation of factors influencing the pressures generated in multi-anvil devices (A).....F 82

- Description and calibration of a modified girdle high-pressure, high-temperature apparatus (A).....F 78

- Effect of assembly components and belt construction on superpressure calibration (A).....F 77

- Electrical resistivity of iron from 20 to 1250 C at static pressures from 25 to 95 kilobars (A).....F 77

- High-pressure microscopy (A).....F 77

- Measurement of shock pressures in solids (A).....F 83

- Modification and calibration of a tetrahedral anvil apparatus (A).....F 76

- Pressure alterations through use of solid containers or jackets in high-pressure environments (A).....F 75

- Rodetermination of the freezing pressure of mercury using improved apparatus and technique (A).....F 50

- Some notes concerning Bridgman's managan pressure scale (A).....F 76

- Some possible fixed points for calibration above 100 kilobars (A).....F 79

- Study of stress homogeneity on cylindrical cavities at high pressures (A).....F 78

- Ultrahigh pressure calibration: influence of cubic workpiece configuration (A).....F 76

- Ultrasonic measurements of elastic properties of small specimens at high pressure (A).....F 78

- Use of melting points for measuring pressure in high-pressure, high-temperature vessels (A).....F 76

- HILL, BYRON MITCHELL
Obituary.....D 97

- HILL, P. G.
Condensation of metal vapors during rapid expansion (A).....Je 67

- HILLER, A. E.
Cement-lined pipe.....Mr 46

- Preparation and use of cement-lined pipe (A).....Ja 72

- HILLER, JOSEPH LILBURN
Obituary.....Mr 111

- HILLS, C. Q.
Computer program for selecting power-plant design parameters (A).....Jl 71

- HILSCH TUBES. See VORTEX TUBES

- HINE, RUSSELL CURTIS
Obituary.....Ja 121

- HIRSCHORN, I. S.
Yttrium nodular cast iron (D).....Mr 83

- HISTORY
Geschichte des Deutschen Verbrennungsmotorenbaues von 1860 to 1918.....Mr 85

- Society for the History of Technology, annual meeting.....F 95

- HITCHES. See MATERIALS HANDLING

- HLINKA, J. W.
Automatic network analog computer for the solution of the biharmonic equation (A).....Je 77

- HOBAN, CHARLES OWEN
Obituary.....D 97

- HODGE, JOHN FREDERICK
Obituary.....S 103

- HODGE, P. G., JR.
Crushing of a tube between rigid plates (A).....O 78

HODGE, P. G., JR. (continued)

- Interaction of pressure, end load, and twisting moment for a rigid-plastic circular tube (A).....N 86

- Limit analysis of shallow shells of revolution (A).....My 90

- HODGER, JOHN LITTLE
Obituary.....D 97

- HOFF, NICHOLAS J.
Buckling of a thin-walled circular cylindrical shell heated along an axial strip (A).....D 67

- HOLBROOK, J. W.
Cost reduction and the young engineer.....Mr 106

- HOLLEMAN, EUGEN C.
Flight-simulator requirements for high-performance aircraft based on X-15 experience (A).....Ag 62

- HOLLERMAN, DOMINIC JOHN
Obituary.....Ap 113

- HOLLISTER, EIRA
Obituary.....Jl 97

- HOLM, KENNETH E.
Water resources: Washington viewpoint.....My 27

HONEYCOMB. See FLOW OF FLUIDS

HONEYCOMB CONSTRUCTION. See STRUCTURES

- HONING
Honing long tubes (A).....O 62

- HONORS AND AWARDS
A.S.A. Standards Medal.....Ja 88

- ASME Awards.....Ja 100

- Announces mechanical engineering student awards.....N 106

- Blackall Machine Tool and Gage Award.....Ja 101

- L. Ray Buckendale Award.....Ap 96

- Wallace Clark International Award.....Ap 96

- Allan P. Colburn Award.....Ja 88

- Howard Cooley Medal.....Ja 88

- 1962 Edison Medal.....F 93

- Egleston Medal.....Ap 96

- Benjamin F. Fairless Award.....Ja 88

- Enrico Fermi Award.....Je 95

- John Fritz Medal.....Ja 100

- Louis W. Hill Space Transportation Award.....F 93

- Hoover Medal.....Ja 101

- International Award in Plastics Science and Engineering.....Ja 88

- Junior Award.....Ja 101

- Lammie Gold Medal.....Je 95

- Leonardo da Vinci Medal.....F 95

- Machine Design Award.....Ja 101

- Charles T. Main Award.....Ja 102

- Marston Award.....N 110

- Melville Medal.....Ja 101

- National Medal of Science.....F 93

- Old Guard Prize.....Ja 102

- Pi Tau Sigma Gold Medal Award.....Ja 102

- Prime Movers Committee Award.....Ja 103

- Richards Memorial Award.....Ja 101

- Harold DeWitt Smith Memorial Medal.....Ap 96

- Speller Award.....Ja 88

- Lawrence Sperry Award.....F 94

- Spirit of St. Louis Medal.....Ja 103

- Timoshenko Medal.....Ja 101

- Undergraduate Student Award.....Ja 102

- Abbott Payson Usher Prize.....F 95

- Worcester Reed Warner Medal.....Ja 101

- Washington Award.....Ap 96

- George Westinghouse Gold Medal.....Ja 103

- Whitney Award.....Ja 88

- Arthur L. Williston Medal and Award.....Ja 102

- HOOD, E. E.
Power for the supersonic transport (D).....Jl 75

- HOOK, J. F.
Bilinear theories in plasticity and an application to two-dimensional wave propagation (A).....N 85

- HOOPER, R. P.
Design of simplified combustion control system for supercharged steam generators (A).....Ap 77

- HOPFENFELD, YORAM
Investigation of electrolytic jet polishing at high current densities (A).....Je 73

- HOPKINSON, B. E.
Copper-nickel alloys for feedwater-heater service (A).....Je 65

- HOPPERS. See MATERIALS HANDLING

- HOFFMANN, W. H., II
Study of the vibrations of shallow spherical shells (A).....N 84

- HORD, JESSE
Effects of liquid-solid interfaces on the nucleation characteristics of cryogenic liquids (A).....Ag 72

- HORGAN, JOHN J.
Thrust nozzles for supersonic transport aircraft (A).....Ag 68

- HORST, RALPH L., JR.
Aluminum surface condenser tubes for steam power plants (A).....My 82

- HORVAY, G.
Temperature distribution in a cylindrical rod moving from a chamber at one temperature to a chamber at another temperature (A).....O 76
- HOWIT, K.
Theory of plasticity applied to machining with cut-away tools (A).....O 75
- HOUEK, JAMES C.
Correlation of factors influencing the pressures generated in multianvil devices (A).....F 80
- HOUCH, WILLIAM W.
Careful with that hitch (D).....S 80
- HOULE, GEORGE A.
"Tedlar" PVF film—a new exterior prefinish for building materials (A).....Je 72
- HOUSE, S. A.
Combustion control: key to better engine performance (D).....O 83
- HOVERCRAFT. *See* GROUND EFFECT MACHINES
- HOVLAND, HAROLD
Status of ultrasonic inspection for pipe and pipelines (A).....D 71
- HOWARD, C. P.
Effect of longitudinal heat conduction on periodic-flow heat exchanger performance (A).....Jl 58
- HOWELL, J. R.
Monte Carlo solution of thermal transfer through radiant media between gray walls (A).....Jl 72
- HOWELL, J. R.
Radiant transfer through a gray gas between concentric cylinders using Monte Carlo (A).....N 82
- HOTT, W. B.
Nickel-steel tank tests at minus 320 (D).....D 76
- Hsu, C. S.
On the parametric excitation of a dynamic system having multiple degrees of freedom (A).....O 79
- HU, L. W.
Load-carrying capacities of simply supported rectangular plates (A).....O 79
- HUBBCK, CHARLES
Obituary.....D 97
- HUEHLE, WILLIAM A.
Obituary.....D 97
- HUGERS, W. F.
Relation between the rubbing interface temperature distribution and dynamic thermocouple temperature (A).....D 66
- HUNT, JOHN M.
High-speed digital equipment for SST and space simulators (A).....Ag 64
- HUTTON, R. E.
Fluid-particle motion during rotary sloshing (A).....D 67
- HUTTON, ULRIC O.
Correlation of factors influencing the pressures generated in multianvil devices (A).....F 80
- HWANG, K. C.
Graphical solutions in Cartesian coordinates (A).....O 77
- HYDRAULIC CONTROL
Cavitation in a valve-controlled hydraulic actuator (A).....N 87
- HYDRAULIC SYSTEMS
Fluid logic: a new computer technique (A).....Je 47
- HYDRAULIC TURBINES. *See also* STRESSES AND STRAINS
Hydraulic turbine operation difficulties (A).....Je 70
- Now: electric governors for hydroturbines.....Ap 55
- HYDRAULICS
Freeman Fellowship for study or research in hydraulics.....D 90
- Simplification of hydraulic line dynamics by use of infinite products (A).....Je 78
- HYDRODYNAMICS. *See also* LUBRICATION
Axially symmetric flow between prescribed surfaces and pump inlet design (A).....Ag 70
- Theory for supercavitating flow through an arbitrary form hydrofoil (A).....Ag 69
- Supercavitating foils with flaps beneath a free surface (A).....Je 69
- HYDROFOILS. *See* HYDRODYNAMICS
- HYDROGEN EMBRITTLEMENT. *See* BOILER CORROSION
- IBBLE, W. E.
Effect of diffusion thermo and thermal diffusion for helium injection into plane and axisymmetric stagnation flow of air (A).....N 80
- Pressure drop and liquid film thickness of two-phase annular and annular-mist (A).....Mr 79
- ICE
No ice problems for power dams, water locks, and piers (A).....My 60
- IMPACT. *See also* SHELLS
Impact behavior of elastomers (A).....Je 72
- INCINERATORS. *See also* MATERIALS HANDLING, REFRACTORIES
Type of Mechanical grates for incinerators (A).....My 87
- INDICATORS. *See* COMPRESSORS
- INDUSTRIAL FILMS.....Mr 94, My 102, D 83
- INDUSTRIAL FURNACES
Fired heater-efficiency improvement (A).....D 69
- Slab reheating furnaces (A).....Je 62
- INDUSTRIAL TRAINING. *See also* EDUCATION
Audio-visual systems: key to quality control.....Ag 46
- INDUSTRY
The human machine—work & environment.....D 22
- Industry and the Admiral (A).....Ja 54
- Motives of men at work (A).....D 72
- R & D—government or industry.....O 30
- Taxes and the 100 largest corporations.....Ag 80
- INFLUENCE COEFFICIENTS. *See* SHELLS
- INFORMATION RETRIEVAL
Information resources for tomorrow's engineer.....S 34
- INGERBOLL, ALFRED C.
Educating tomorrow's engineers.....D 20
- INJECTION. *See* BLAST FURNACES
- INSPECTION. *See also* NONDESTRUCTIVE TESTING
Designing a mechanical eye.....Je 32
- Putting the "reli" in reliability through one hundred percent inspection (A).....S 76
- IEEE-ASME Railroad Conference, 1963.....Mr 101
- INSTRUMENTS. *See also* CALCULATORS, COMPRESSORS, PETROLEUM PIPELINES, TEXTILE INDUSTRY
Instant answers with the Data Scaler for analyzing strip-chart records (A).....Ag 57
- Instrumentation in food industry (A).....Jl 68
- Long range measurements (A).....S 77
- Rugged, reliable space sensors (A).....S 64
- Stable table for testing inertial guidance components (A).....F 62
- Which way is north? (A).....My 77
- INSTRUMENTS—MEASURING
0.000040-in. accuracy (A).....Je 60
- INSTRUMENTS—OPTICAL
Fiber-optic probe for interior examination of machinery (A).....S 60
- INSTRUMENTS—PRESSURE. *See* HIGH-PRESSURE RESEARCH
- INSTRUMENTS—TEMPERATURE
High response aerosol probe for sensing gaseous temperature in a two-phase, two-component flow (A).....Je 65
- High-temperature calibration (A).....F 66
- Miniature engine thermometer (A).....Ja 66
- Pyrometer for moving surfaces (A).....My 76
- Relation between the rubbing interface temperature distribution and dynamic thermocouple temperature (A).....D 66
- Steady-state thermal analysis of a thermometer well (A).....Je 65
- INTERCONNECTION. *See* POWER SYSTEMS
- INTERNAL—COMBUSTION ENGINES. *See* THERMODYNAMICS
- INTERNATIONAL RELATIONS
International cooperation does work; objective achieved by Sixth International Conference on the Properties of Steam.....D 87
- INVENTION. *See also* CREATIVITY
In case of invention (D).....Ap 87
- You ought to patent that (BR).....Ap 80
- INVENTORY
Optimum maintenance stores and inventory control (A).....S 75
- Use of computer in production and inventory-control systems (A).....S 77
- INVESTMENT CASTING. *See* DIE CASTING
- ION THRUST DEVICES. *See* SPACE VEHICLES
- IPSON, T. W.
Ballistic perforation dynamics (A).....N 85
- IRON
Parameter representation of the yield behavior of iron (A).....Jl 69
- IRON AND STEEL INDUSTRY
Britain's newest steelworks (A).....Ja 65
- Europe's fastest rod mill (A).....S 71
- IRON AND STEEL MANUFACTURE
Blast-furnace fuel injection.....N 52
- First continuous-casting plant (A).....My 71
- Using Argon to Degas steel (A).....D 47
- IRWIN, G. R.
Crack-extension force for a part-through crack in a plate (A).....My 90
- IVILICUR, BETZALEL (*See* AVITUR)
- IWAIA, K.
Buckling of simply supported oblique plates (A).....O 79
- JACKSON, G. M. JR.
Digital-computer design of pipelines (A).....D 71
- JACKSON, T. W.
Viscous fluid flow under the influence of a resonant acoustic field (A).....Mr 77
- JACOBS, GORDON
Redesigning standard machines (A).....O 70
- JACOBS, T. A.
Influence of the equilibrium dissociation of a diatomic gas on Brayton-cycle performance (A).....Je 77
- JACOBSEN, T. L.
Audio-visual concepts in industrial manufacturing (A).....Ap 78
- Audio-visual systems: key to quality control.....Ag 46
- JACOBUS, ROBERT FULTON
Obituary.....F 110
- JACQUES, M.
Some applications of the maximum principle to second-order systems, subject to input saturation, minimizing error, and effort (A).....Jl 68
- JAEGER, CHARLES
Theory of resonance in hydropower systems. Discussion of incidents and accidents occurring in pressure systems (A).....Je 70
- JAHANSKARI, A.
Forced singularities of shallow cylindrical shells (A).....O 80
- JAKOBSEN, J. K.
On the mechanism of head breakdown in cavitating inducers (A).....Ag 70
- JARANT, F. A.
Design and operation of automatic burner-control system for West Texas Utilities Company—Oak Creek Power Station (A).....Ja 70
- JAREK, A. W.
New developments in determining BS&W (A).....Ja 71
- JENKS, BARTON L. JR.
Dynamic characteristics and design criteria for a class of vibration-producing machines (A).....My 86
- JEFFSON, GEORGE N.
Obituary.....Mr 111
- JET ENGINE. *See* GAS TURBINES
- JET PROPULSION. *See also* AIRPLANE ENGINES
System vibration and static analysis (VAST program) (A).....Jl 61
- JETS. *See* JUNIOR ENGINEERING TECHNICAL SOCIETY
- JETS. *See also* FLOW OF FLUIDS
Combined analytical and experimental approach to the development of fluid-jet amplifiers (A).....Je 70
- JEVNES, P. H.
New deal in depreciation (D).....Ag 75
- JHAVERI, P.
Mechanism of chip curl and its importance in metal cutting (A).....Ap 83
- JICHA, J. J.
Two-phase pressure drop across vertically mounted thick plate restrictions (A).....O 77
- JILL, L. M.
Bubble boundary layer and temperature profiles for forced convection boiling in channel flow (A).....Je 67
- JOHNSON, A. E. FREDRICK
Obituary.....N 113
- JOHNSON, R. A.
Containment for boiling water reactors (A).....My 79
- JOHNSON, IVAR
Prevention of cyclic thermal-stress cracking in steam turbine rotors (A).....D 68
- JOHNSTON, ELMER M.
Biography.....Ag 93
- Nominated for Vice-President.....Ag 93
- JONES, A. R.
Large nuclear power plants—their commercial availability, operational predictability and economics (A).....My 80
- JONES, HARLAN R. E.
Obituary.....Jl 97
- (A) denotes Abstract; (AC) Author's Closure; (BR) Book Review; (C) Correspondence; (D) Discussion; (Ed) Editorial

JONES, MELVIN L.	Burders for shop-fabricated boilers (A).....F	84
JONES, O. E.	Longitudinal strain pulse propagation in wide rectangular bars	
Part 1—Theoretical considerations (A).....Ap		80
Part 2—Experimental observations and comparisons with theory (A).....Ap		80
JONES, STACY V. (author)	You ought to patent that (BR).....Ap	89
JOHNSON, V. K.	Heat transfer and forces for free-molecule flow on a concave cylindrical surface (A).....Je	68
	Thermal radiation absorption in rectangular-groove cavities (A).....Je	76
JOSEPH, LYMAN COLT	Obituary.....N	113
JOYCE, C. P.	Compressor station design and performance (A).....S	74
JUDICE, JOHN A.	Fired heater-efficiency improvement (A).....D	69
JUNIOR ENGINEERING TECHNICAL SOCIETY	JETS elect president.....N	111
	JETS nationwide program seeks boys and girls with talent for engineering.....Mr	105
JURA, GEORGE H.	Calibration of Bridgman anvils—a pressure scale to 125 kilobars (A).....F	76
JURAN, JOSEPH M.	Research in management—needs, projects, and procedures (A).....Ap	79
JUREWICZ, L. S.	Measurements of heat transfer from a cylinder with air injection into a turbulent boundary layer (A).....N	80

K

KAKARALA, C. R.	Influence of axial heat-flux distribution of the departure from nucleate boiling in a water-cooled tube (A).....My	78
KAJITA, K.	Effects of misalignment on the forces acting on the retainer of ball bearings (A).....D	65
KALLAM, FLOYD L.	Biography.....Je	100
	Elected Fellow of ASME.....Je	100
KALPAKCIÖGLU, SEROPE	Maximum reduction in power spinning of tubes (A).....O	74
KAMMER, KARL PFISTER	Obituary.....Jl	97
KANE, T. R.	Impulsive motions (A).....Ja	74
KANNEL, J. W.	Rheological behavior of the lubricant in the contact zone of a rolling contact system (A).....D	64
KANO, CYRUS	Influence of geometrical design factors on the bending fatigue strength of crankshafts (A).....My	85
KANTER, J. J.	Yttrium nodular iron (AC).....Mr	83
KARP, S.	Unsteady forces due to propeller-appendage interaction (A).....N	85
KATZBERG, NICHOLAS	Heat-transfer and fluid friction characteristics of tube cluster with boundary layer turbulence promoters (A).....O	77
KATI, SAMUEL	Ultrasonic measurements of elastic properties of small specimens at high pressure (A).....F	76
KATZENSTEIN, HENRY S.	Reliability—designing for reliability.....My	38
KAUFMAN, LARRY	Electrical resistivity of iron from 20 to 1250° C at static pressures from 25 to 95 kilobars (A).....F	78
KAUSLA RICH, J. J.	Momentum integral approximation for compressible magnetohydrodynamic boundary-layer flow (A).....O	79
KATA, W. M.	Laminar flow heat transfer to a gas with large temperature differences (A).....Mr	77
KECK, J. WYLLY	Operating experience with chemical-slurry spray process in retarding fireside deposits and corrosion (A).....Jl	70

(A) denotes Abstract; (AC) Author's Closure;
(BR) Book Review; (C) Correspondence;
(D) Discussion; (Ed) Editorial

KERO, R. L.	Study of energy requirements for electric discharge metal forming (A).....O	74
KERRY, L. G.	Investigation of a shear-force pump (A).....My	83
KELCEG, GEORGE	Coal slurry-firing at the Werner Station (A).....Ja	69
KELLER, HENRY C.	Biography.....Je	100
	Elected Fellow of ASME.....Je	100
KELLY, H. H.	International engineer (C).....Ag	74
KELLY, R. W.	Rotating disk approach for cavitation damage studies in high-temperature liquid metal (A).....Ag	71
KEMNER, JOSEPH	Stresses in short noncircular cylindrical shells under lateral pressure (A).....Mr	80
KENIGBERGER, F. (author)	Berechnungen, Konstruktionsgrundlagen und Bauelemente spanender Werkzeugmaschinen (BR).....Mr	85
KENNEDY, ERNEST D.	Application of a new method of approximation in the solution of ordinary differential equations to the Blasius equation (A).....N	87
KENNEDY, WILLIAM PERCIVAL	Obituary.....O	108
KERSON, W. J.	Requirements and possible solution for lubrication of bearings and gears in a space simulator (A).....Mr	74
KESNOCK, E. G.	Combined radiation and convection in an asymmetrically heated parallel plate flow channel (A).....O	76
KESTIN, J.	Viscosity of superheated steam up to 275 deg C. A refined determination (A).....Mr	77
KETPITZ, I. M.	Role of a superheat power experiment in the development of supercritical steam nuclear-fired power plants (A).....My	79
KIEFER, CARL J.	Obituary.....F	110
KIKUCHI, K.	Theory of plasticity applied to machining with cut-away tool (A).....O	75
KIMBLE, ROBERT	Long range measurements (A).....S	77
KINEMATICS	Contribution to Gruebler's theory in the number synthesis of plane mechanisms (A).....My	88
	Geared five-bar motion.	
Part 1—Gear ratio minus one (A).....Je		77
Part 2—Arbitrary commensurate gear ratio (A).....Je		77
	Harmonic analysis of spherical four-bar mechanisms (A).....Ja	73
	Synthesis of path-generating mechanisms by numerical methods (A).....My	88
	Vector analysis of linkages (A).....My	88
KING, A. G.	Ceramic tool wear (A).....S	76
KING, BLAKE	Object: "creativity".....N	38
KING, ROBERT I.	Evolution of a landing system (A).....Jl	62
KIPPENHAIN, C. J.	Binary fluid waste-heat recovery cycle for engine and turbine prime movers (A).....S	75
KISTLER, PAUL NORMAN	Obituary.....Mr	111
KLAUS, E. E.	Trends in liquid lubricants.....O	42
KLEIN, BERNARD D.	Obituary.....Ap	113
KLEIN, STANLEY	Professional achievement for engineers and scientists (BR).....N	93
KLOUMAN, G. H.	New performance data on precipitation-hardening stainless steels (A).....D	69
KLYACHEKO, L. E.	Heat transfer between a gas and a spherical surface with the combined action of free and forced convection (A).....Je	67
KNOEDLER, E. L.	Case histories of hydrogen damage in boilers (A).....D	63
KWUTE, E. L.	Richard Mollier—100th anniversary.....D	38
KOBAYASHI, S.	Mechanics of conventional spinning (A).....Je	74
	Upper-bound solutions of axisymmetric forming problems—I (A).....O	74

KOBORI, TAKUJI	Dynamical compliance of rectangular foundations on an elastic half-space (A).....N	87
KOFSKEY, MILTON G.	Secondary-flow phenomena in stator and rotor-blade rows and their effect on turbine performance (A).....Ag	68
KOONTE, R. L.	Constructing low-leakage reactor housing using conventional materials (A).....My	79
KOPENHAVER, WILLIAM HAWK	Obituary.....D	97
KORST, H. H.	On the separation, reattachment, and redevelopment of incompressible turbulent shear flow (A).....Jl	63
KOSKINEN, MICHAEL F.	Elastic-plastic deformation of a single grooved flat plate under longitudinal shear (A).....My	89
KOSTOCH, F. R.	The X-15—the first manned space structure (A).....Mr	74
KOTERHUB, MEINHARD HENRY	Obituary.....Jl	97
KRAFT, L. SHELBAUGH	Designing the moving-walk belt.....My	44
KRAUS, H.	Flexure of a circular plate with a ring of holes (A).....Ja	73
KREITH, F.	Boundary layer and transition characteristics of a rotating cone (A).....Je	69
KRIEG, EDWIN H.	George Westinghouse Gold Medal.....Ja	103
KRONENBERG, MAX	Berechnungen, Konstruktionsgrundlagen und Bauelemente spanender Werkzeugmaschinen (BR).....Mr	85
KRYNICKI, E.	Free vibration of a simply supported bar with a linearly variable height of cross section (A).....Ja	73
KUGLER, ARTHUR N.	Nickel-steel tank tests at minus 320 (D).....D	75
KUHN, G. OWEN	Popular heat sources for absorption refrigeration (A).....S	72
KUO, J. K.	Nonlinear normal mode vibrations of nonlinear systems having two degrees of freedom (A).....D	66
KURTROCK, R. C.	Is coal fuel for MHD power?.....O	38
KUZMA, D. C.	Finite magnetohydrodynamic journal bearing (A).....D	64
	Magnetohydrodynamic squeeze films (A).....D	64
LADD, D. C.	Improving electric system reliability (A).....S	75
LA FLEUR, JAMES K.	Description of an operating closed-cycle helium gas turbine (A).....Ag	68
LAKET, ARTHUR BENJAMIN	Obituary.....My	123
LAKSHMIKANTHAM, C.	Limit analysis of shallow shells of revolution (A).....My	90
LAMINATES. See COMPOSITE MATERIALS		
LAMORI, PHILLIP N.	Calibration experiments in a piston-cylinder apparatus (A).....F	77
LAMSON, E. R.	Antifriction bearing design considerations for solid lubrication (A).....N	77
LANCE, R. H.	Analysis of plastic shallow conical shells (A).....My	91
LANDAU, H. G.	Automatic network analog computer for the solution of the biharmonic equation (A).....Je	77
LANDING SYSTEMS	Evolution of a landing system (A).....Jl	62
LANDIS, FRED	Effect of spacewise lumping on the solution accuracy of the one-dimensional diffusion equation (A).....Je	76
	Friction and forced convection heat-transfer characteristics in tubes with twisted tape swirl generators (A).....Je	68
LANG, A. B.	Criticism of radioactive tool life testing (A).....Je	74
LANG, H. M.	Superimposing multiple channel data on a high-speed cine record (A).....D	70

- LANGTEAU, R. R.
Cavitation in an impeller—looking from the inside out (A).....Ag 71
- LANGTRY, WILMER DYER
Obituary.....Ag 97
- LANGWORTHY, WILLIAM PROBARCO
Obituary.....Ja 121
- LANFORD, W. T., JR.
Nickel-steel tank tests at minus 320.....Jl 40
- LAPPIN, T. A.
Selective radiation properties of particulate coatings (A).....Jl 64
- LAREW, JOEL LEE
Obituary.....Jl 97
- LARKIN, WILLIAM H.
Biography.....D 93
Elected Fellow of ASME.....D 93
- LARSON, P. E. A.
Application of diesel engines for gas-turbine starting service (A).....S 74
- LASERS
Laser communication experiments (A).....My 69
Laser will track satellite (A).....F 63
"Lasers, a bibliography"; available from O.T.S.....Mr 96
Light-beam rifle as rangefinder (A).....Je 52
Liquid laser offers new wavelengths (A).....Mr 61
- LATHERS. *See* MACHINE TOOLS
- LATHEY, CHAUNCEY C.
The why of computerized programming of numerically controlled machine tools (A).....S 77
- LAUDMAN, CHARLES W. (author)
Principles underlying systems engineering (BR).....Ag 77
- LAUNCHING. *See* MISSILES
- LAUNDER, B. E.
Improved Fohlbhausen-type method of calculating the two-dimensional laminar boundary layer in a pressure gradient (A).....N 81
- LATKEV, CARL
Continuous carbon-arc for solar simulation (A).....Mr 72
- LEACH, VERNON GARDE
Obituary.....N 113
- LEAK FINDERS. *See* GAS PIPELINES
- LEATHERMAN, R. A.
Component thermal control via heat of fusion radiator (A).....Jl 58
- LEAVENGOOD, W. H.
Some significant diesel-electric locomotive repair cost trends (A).....O 72
- LEE, DONALD E.
New development in flange seals (A).....D 69
- LEE, E. BRUCE
Pi Tau Sigma Gold Medal Award.....Ja 102
- LEE, E. H.
Solution of viscoelastic stress analysis problems using measured creep or relaxation functions (A).....Ap 81
- LEE, H. C.
Generalized minimum principle and its application to the vibration of a wedge with rotary inertia and shear (A).....O 78
- LEE, SHAO-LIN
Taylor instability of a liquid film around a long, horizontal, circular cylindrical body in still air (A).....N 86
- LEE, TUNG-MING
Flexure by a concentrated force of the infinite plate on a circular support (A).....My 90
- LEE, YEE
Gravity hopper design (D).....Jl 76
- LEENDERTSE, J. J.
Wave-induced motions of a large rocket vehicle drifting in a vertical attitude (A).....Je 67
- LEISER, P. J.
Use of computer in production and inventory-control systems (A).....S 77
- LEISER, EDWARD WILTON
Biography.....S 102
Elected Fellow of ASME.....S 102
- LEHMAN, A. F.
Experimental investigations of incipient and desinent cavitation (A).....Ag 70
- LEMOCKY, PAUL N.
Biography.....S 102
Elected Fellow of ASME.....S 102
- LEITCHFUS, MILTON R.
Burning of a heavy fuel in a medium-speed, high bmeq engine (A).....S 74
- LEJA, J.
Recovery of vanadium from petroleum ash (A).....F 83
- LENGBRIDGE, JOHN WILLIAM
Obituary.....D 97
- LEPPERT, G.
Critical heat flux for nearly saturated water flowing normal to a cylinder (A).....Mr 78
Critical heat flux for subcooled water flowing normal to a cylinder (A).....Mr 78
- LESIEWICZ, HENRYK J.
Approach to the theory of hydraulic pressure-regulating relief valves (A).....Ag 72
- LEVENE, MARTIN L.
Continuous carbon-arc for solar simulation (A).....Mr 72
- LEVY, ARTHUR
Sulfur chemistry and its role in corrosion and deposits (A).....Jl 71
- LEWIS, M.
Now: Electric governors for hydroturbines.....Ap 55
- LEWIS, FRANK M.
Biography.....O 106
Elected Fellow of ASME.....O 106
- LEWIS, JAMES TYLER
Obituary.....My 123
- LICAUSI, ANTHONY C.
Supercharged steam generator; its first shipboard installation (A).....Ap 76
- LIGHT, L.
Dynamics of externally pressurized sliders with incompressible and compressible films (A).....D 65
- LIGHT, WILLIAM
American Petroleum Institute engineering reports on removal of particulate matter from gaseous wastes (A).....Ja 72
- LIENHARD, J. H.
Dominant unstable wavelength and minimum heat flux during film boiling on a horizontal cylinder (A).....O 76
- LIFE SUPPORT SYSTEMS. *See* SPACE VEHICLES
- LIGHTING
Sheet lighting by electroluminescence (A).....My 62
- LIGHTNER, R. G.
Two-phase pressure drop across vertically mounted thick plate restrictions (A).....O 77
- LINCOLN, SAMUEL B.
One hundred years of textile-mill engineering (A).....O 73
- LIND, N. C.
Plastic analysis of radial outlets from spherical pressure vessels (A).....D 70
- LINDBERG, H. E.
Buckling of a very thin cylindrical shell due to an impulsive pressure (A).....N 88
- LINDELL, W. F.
Honored by Delaware Section.....N 110
- LINDER, C. H.
Elected president of United Engineering Trustees.....Ja 89
- LINDSAY, JOHN OLIVER
Obituary.....Ag 97
- LINEAR PROGRAMMING. *See* MATHEMATICS
- LINHARDT, H. D.
Note on the application of cascade theory to design of axial-flow pumps (A).....My 82
- LINKAGES. *See* KINEMATICS
- LIQUID METALS
Rotating disk approach for cavitation damage studies in high-temperature liquid metal (A).....Ag 71
- LIQUIDS
Continuous mixing of very viscous fluids in an annular channel (A).....Je 73
Fluid-particle motion during rotary sloshing (A).....D 67
- LIRACK, JOHN P.
Qualitative educational requirements for Air Force officers (A).....O 73
- LISNER, HERBERT R.
Biomechanics—what is it?..Ja 25, (A) Ap 78
- LIU, RUEY-WEN
Synthesis of mechanical vibration filters with nonlinear characteristics (A).....My 87
- LLOYD, J. R.
Influence of the equilibrium dissociation of a diatomic gas on Brayton-cycle performance (A).....Je 77
- LOCOMOTIVES
Is rail adhesion a limitation on the growth of internally powered locomotives? (A).....Jl 70
- LOCOMOTIVES—DIESEL
High horsepower diesel-hydraulic locomotives in heavy duty freight service (A).....S 70
New locomotives for freight service (A).....Ag 52
Use of Canadian crudes in locomotive diesel engines (A).....Jl 70
- LOCOMOTIVES—DIESEL-ELECTRIC
Locomotives: a new design approach to engine cooling (D).....Ja 79
Some significant diesel-electric locomotive repair cost trends (A).....O 72
- LOCOMOTIVES (continued)
2750-hp diesel-electric locomotive (A).....O 60
- LOCOMOTIVES—GAS-TURBINE. *See* AIR FILTERS
- LOF, GEORGE O. G.
Optimization of focusing solar-collector lens (A).....Jl 63
Study of a solar air conditioner.....Ag 31
- LOGAN, JAMES M.
Gas-turbine application in U. S. Coast Guard vessels (A).....Ag 69
- LORDON, A. L.
Transient response of gas turbine plant heat exchangers. Additional solution for regenerators of the periodic-flow and direct-transfer types (A).....Jl 58
- LONG, GEORGE C.
Air conditioning for textile mills (A).....Ag 66
- LONGWELL, P. A.
Graphical solutions in Cartesian coordinates (A).....O 77
- LORENC, S. A.
Performance of solid rocket motors with gas-particle flow (A).....Ag 63
- LOSCUTOFF, W. V.
Fluid-temperature transients in a dual heat-exchanger system (A).....Je 78
- LOSER, JOHN B.
New research findings on thermophysical properties and uses of insulating materials (A).....O 70
- LOUSEN, JAMES KEITH
Biography.....Ag 91
Nominated for Director.....Ag 91
- LOUZECKY, PAUL J.
Burning of heavy fuel in a medium-speed, high bmeq engine (A).....S 74
- LOVE, L. R.
Shippingport operating experience (AC).....Ja 79
- LOVEJOY, S. W.
Examples of modified turbine testing (A).....Je 66
For power plants: variable-pressure operations.....Ag 38
Improved station heat rate with variable-pressure operation (A).....Je 64
- LOVELL, JOHN
Developments in the state of the art of regenerable solid absorbent CO₂ removal systems (A).....Ag 62
- LOW-TEMPERATURE RESEARCH. *See* also METAL TESTING
Boiling heat transfer with cryogenic fluids at standard, fractional, and near-zero gravity (A).....N 81
Effects of liquid-solid interfaces on the nucleation characteristics of cryogenic liquids (A).....D 72
Fuel tanks for spacecraft: the difficulties.....Ap 44
- LUBIN, BARRY T.
Prediction of space radiator performance (A).....Ag 63
- LUBRICANTS
Analysis of factors influencing lubricating-oil contamination in diesel engines (A).....S 74
Low-friction lubricants (A).....Mr 63
Lubricant evaluation for 840 F and 1000 F maximum temperature ball-bearing screw-driven actuators (A).....Jl 68
Rheological behavior of the lubricant in the contact zone of a rolling contact system (A).....D 64
Size and speed effects from lubricant breakdown in plastic compression (A).....Je 73
Trends in liquid lubricants.....O 42
Viscosity-temperature-pressure relationship of lubricating oils and its correlation with chemical constitution (A).....Jl 68
- LUBRICATION. *See* also BEARINGS, GEARS
Antifriction bearing design considerations for solid lubrication (A).....N 77
Approximate methods for time-dependent gas-film lubrication problems (A).....N 88
Compressible squeeze films and squeeze bearings (A).....D 63
Dynamics of externally pressurized sliders with incompressible and compressible films (A).....D 63
Finite magnetohydrodynamic journal bearing (A).....D 64
Influence of finite-wall conductance on load capacity of the magnetohydrodynamic slider bearing (A).....D 63
Magnetohydrodynamic squeeze films (A).....D 64
New bearing lubrication system (A).....S 63
Using chemical and physical properties of material to aid in lubrication (A).....N 78

LUECKING, ARTHUR W. Electrolytic grinding (A).....	O	68
LUMLEY, J. L. Passage of a turbulent stream through honeycomb of large length-to-diameter ratio (A).....	Jl	62
LUNCH, M. E. Plastic general-instability pressure of submarine pressure hulls (A).....	Je	67
LUND, J. W. Hydrostatic gas journal bearing with journal rotation and vibration (A).....	O	74
LUNDGREN, T. S. Heat transfer and forces for free-molecule flow on a concave cylindrical surface (A).....	Je	68
LURVE, J. R. Unsteady forces due to propeller-ap- pendage interaction (A).....	N	85

M

MA, J. T. S. Cavitation in valve-controlled hydraulic actuators (A).....	N	87
MAREY, ARTHUR ROE Obituary.....	Ap	113
MCADAMS, H. T. Role of topography in the cutting per- formance of abrasive tools (A).....	S	76
Search for new manufacturing processes (A).....	O	75
Statistical polyhedron model of abrasive grain (A).....	Je	74
MCALPIN, WILLIAM J. Biography.....	Ag	93
Nominated for Vice-President.....	Ag	93
MCALPINE, GORDON A. Putting the "reli" in reliability through one hundred percent inspection (A).....	S	76
MCARDLE, WESLEY EMERY Obituary.....	Jl	97
MCALIFFE, D. R. What to do about gas-turbine noise (A)	Ag	69
MCCRAIG, I. W. Measurements of auto-oscillation in a hydroelectric supply tunnel and pen- stock system (A).....	Je	70
MCCHEENEY, IRVIN G. Biography.....	F	101
Elected Fellow of ASME.....	F	101
MCCLAMMY, HERBERT Obituary.....	Je	107
MCCLEURE, ELTON R. Measuring surface finish.....	D	42
McCoy, J. J. Extensional waves along the edge of an elastic plate (A).....	My	90
McCRORY, R. J. Method—the design method.....	My	30
Synthesis of concepts in the design method (A).....	O	70
MCCURBIN, JOHN DANIEL SERVICE Obituary.....	Ja	121
MCCULLOUGH, E. M. Economics of multitool lathe operations (A).....	Ap	83
MACDONALD, S. Koppers high-pressure solids injection system (A).....	F	84
McGINNIS, J. O. Structure and challenge of production planning (A).....	Je	74
McGOWAN, J. G. Transient response of gas turbine plant heat exchangers. Additional solution for regenerators of the periodic-flow and direct-transfer types (A).....	Jl	58
MACGREGOR, CHARLES A. Some preliminary design considerations of turbopumps for liquid rocket engines (A).....	Ag	64
MACHINABILITY. See METAL CUTTING		
MACHINE DESIGN. See also WELDMENTS		
Contest two—a problem in machine de- sign.....	Jl	34
Design and the education of mechanical engineers (BR).....	O	85
Design contest—50 years ago (A).....	S	80
Design opportunities with metals (A).....	O	70
Designing limited quantity machines (A)	O	71
Determining design feasibility (A).....	O	71
Designing machinery, materials, and the design method.....	S	51
Method—the design method.....	My	30
New nylon for machine parts (A).....	D	50
Redesigning standard machines (A).....	O	70

(A) denotes Abstract; (AC) Author's Closure;
(BR) Book Review; (C) Correspondence;
(D) Discussion; (Ed) Editorial

MACHINE DESIGN (continued)		
Selecting proper weldments for optimum product performance and fabrication (A).....	O	71
Selection of material in minimum weight design (A).....	O	69
Selection of materials for minimum weight design (A).....	O	71
Steel castings in weldments cut costs.....	Jl	28
Synthesis of concepts in the design method (A).....	O	70
Teaching engineering design (A).....	Mr	64
Test approaches for simulating operating conditions (A).....	O	68
Use of computers in minimum-weight structural design (A).....	N	78
Winners announced for second ASME Design Problem Contest.....	S	92
World of the design engineer.....	My	29
MACHINE TOOLS. See also METAL CUT- TING, WELDMENTS		
Automatic in-process machine control gaging (A).....	S	78
Berechnungen, Konstruktionsgrundlagen und Bauelemente spanender Werk- zeugmaschinen (BR).....	My	85
Boring machine spindle (A).....	Ag	56
Ceramic tool wear (A).....	S	76
Criticism of radioactive tool life testing (A).....	Je	74
Disk flanging machine (A).....	Je	63
Drill, mill, tap, and bore with numerical control (A).....	Je	55
Economics of multitool lathe operations (A).....	Ap	83
High-strength tool geometry—a result of research in tool geometry (A).....	O	75
Master-slave tracer system (A).....	My	68
Multiple tool holder (A).....	Je	51
No need for collets or chucks (A).....	F	60
Nonelectronic numerical control system for machine tools (A).....	Je	54
Selbsterregte Schwingungen an Werk- zeugmaschinen (BR).....	Mr	84
Tool cooler (A).....	F	67
Tool life for cuts wherein the cutting speed varies during the cut (A).....	Ap	84
Tool-life testing by response surface methodology—part 1 (A).....	O	74
Tool life testing by response surface methodology—part 2 (A).....	O	76
The why of computerized programming of numerically controlled machine tools (A).....	S	77
MACHINERY. See FOUNDATIONS		
Fiber-optic probe for interior examina- tion of machinery (A).....	S	60
McILROY, WILLIAM Analysis of factors influencing plasma- engine performance (A).....	Jl	62
McINTOSH, DAVID CARTER Obituary.....	Ja	122
McINTYRE, S. S., JR. Missile crane on AS-19 sub tender (A)	Jl	62
McIVOR, I. K. Elastic cylindrical shell under nearly uniform radial impulse (A).....	N	87
McKEE, NEAL TRIMBLE Obituary.....	Ja	122
McKEERAN, L. W. Funicular polyhedra (A).....	O	79
MACKIEWICZ, WILLIAM V. Heat-transfer and fluid friction charac- teristics of tube cluster with boundary layer turbulence promoters (A).....	O	77
McKIERNAN, J. W. Practical mechanized scheduling for any maintenance department (A).....	S	75
McLAUGHLIN, E. J. Psychological and medical problems in space flight (A).....	Ag	65
McLEAN, D. (author) Mechanical properties of metals (BR).....	My	93
McLENNAN, DAVID WALLACE Obituary.....	O	110
MACLEOD, NORMAN DOUGLAS Obituary.....	D	97
McLEOD, ROBERT EDWARD Obituary.....	My	123
McMANUS, H. N. Experimental investigation of free-con- vection heat transfer from rectangular- fin arrays (A).....	Ja	75
MACMILLIAN, J. H. Testing and initial operation of the NS Savannah (A).....	NS	81
McNALL, F. M. Gas engineering-driven compressor bear- ing evaluation (A).....	S	72
McNALLY, THOMAS Obituary.....	N	113
McNEILLY, VANCE H. Obituary.....	Mr	111
McNIVEN, H. D. Dispersion of axially symmetric waves in elastic rods (A).....	Je	7

MACFARLAN, M. Design and operation of automatic burner-control system for West Texas Utilities Company—Oak Creek Power Station (A).....	Ja	70
MADSEN, WAYNE A. Buckling of a thin-walled circular cy- lindrical shell heated along an axial strip (A).....	D	67
MAGNESIUM. See DIE CASTING		
MAGNETIC ROADS. See TRANSPORTATION		
MAGNETOHYDRODYNAMICS. See also LUBRI- CATION		
Effect of wall electrical conductance on magnetohydrodynamic heat transfer in a channel (A).....	Je	68
Is coal the fuel for MHD power?.....	O	38
MHD generator proposed (A).....	Ja	60
New MHD generator (A).....	Mr	62
Symposium on engineering aspects of magnetohydrodynamics, April, 1963.....	F	99
MAGOS, J. P. Yttrium nodular iron (AC).....	Mr	83
MAHAN, J. F. Manufacturing dynamics (A).....	S	78
MAINTAINABILITY		
Joint AIAA-ASME Aerospace Relia- bility and Maintainability Confer- ence.....	Mr	102
MAINTENANCE. See also RAILROADS, SPACE TRAVEL		
Control of maintenance costs through planning techniques (A).....	S	75
Optimum maintenance stores and in- ventory control (A).....	S	75
Practical mechanized scheduling for any maintenance department (A).....	S	75
Preventive maintenance in boiler safety (A).....	N	42
MALVERNE, L. E. Application of numerical mapping to the Muskhelishvili method in plane elas- ticity (A).....	O	80
MANAGEMENT. See also COSTS, MARKET- ING, PERSONNEL WORK, TIME AND MOTION STUDY		
Classification and quantification of managerial work (A).....	Ap	79
Engineered use of time (A).....	D	72
Engineering concepts in line management (A).....	D	72
Engineering groups—a favorable social milieu (A).....	Ap	79
Engineer's role in profitability analysis (A).....	D	70
Factors in make-or-buy decisions of components and parts (A).....	O	68
Future pathways for management.....	Je	30
International Management Congress, 1963.....	N	96
Management development program for engineers (A).....	D	72
Management of defense R & D (A).....	D	72
Managing creative scientists and engi- neers (BR).....	S	81
Manpower wastage.....	Jl	38
Performance index and overall status from line of balance (A).....	Ag	79
PERT slide rule (A).....	O	55
Process—the closed loop of design.....	My	32
Research in management—needs, pro- jects, and procedures. Ap 38, (A) Ap	Ap	79
SAM-ASME Management Engineering Conference, 1963.....	Ap	107
System—PERT in product design.....	My	35
World's top executives to meet at 13th International Management Congress.....	Jl	81
MANDRELA. See PETROLEUM-WELL EQUIPMENT, PIPELINES		
MANEELY, D. J. Expansion of a very low quality two- phase fluid through a convergent-di- vergent nozzle (A).....	Jl	62
MANGAN, J. L. Heat recovery from gas-turbine exhaust (A).....	D	68
Highly efficient steam-turbine gas-tur- bine cycle (A).....	Ag	68
MANN, ROBERT W. Evaluation of energy and power require- ments for externally powered upper- extremity prosthetic and orthopedic devices (A).....	Ag	78
MANOMET, LOUIS Government control of packaging (C).....	Ag	74
MANOR, WILLIAM P. Performance tests of long travel cushion underframes (A).....	O	72
MANPOWER. See also MANAGEMENT		
Manpower needs (Ed).....	F	25
Student attrition, is it undermining our nation's engineering manpower?.....	My	101
The task ahead (Ed).....	O	25
2.7 million NSF estimate of U. S. man- power resources in science and tech- nology (A).....	O	93

METEOROID SHIELDS. <i>See</i> SPACE VEHICLES	
METRIC SYSTEM. <i>See also</i> WEIGHTS AND MEASURES	
ASTM recognizes metric system to increase American exports.....Ap	94
MEYER, JAMES A.	
Waste heat recovery for textile finishing plants (A).....Ag	66
MEYER, ROBERT H.	
Gas compressor testing using modern recording oscillographic equipment (A).....S	74
MICHAEL, N.	
Techniques of atomic reactor plant decontamination (A).....Jl	71
MICHAEL, W. A.	
Approximate methods for time-dependent gas-film lubrication problems (A).....N	88
MICHALOS, JAMES	
Flexibility analysis of three-dimensional pipeline networks (A).....D	67
MICKS, WILLIAM R.	
Selection of materials for minimum weight design (A).....O	71
MICROSCOPY. <i>See</i> HIGH-PRESSURE RESEARCH	
MIGDAL, DAVID	
Thrust nozzles for supersonic transport aircraft (A).....Ag	68
MIGEL, HAMILTON	
More direct approach to setting acceptance standards for nondestructive tests (A).....D	70
MIKLOWITZ, JULIUS	
Bilinear theories in plasticity and an application to two-dimensional wave propagation (A).....N	85
MIKOL, E. P.	
Visual and photographic study of the inception of vaporization in adiabatic flow (A).....Ag	70
MIKULAK, JOHN	
Selecting proper weldments for optimum product performance and fabrication (A).....O	71
MILES, J. W.	
On the annular damper for a freely precessing gyroscope (A).....O	78
MILICH, J. J.	
Rotating disk approach for cavitation damage studies in high-temperature liquid metal (A).....Ag	71
MILLER, E. E.	
Danger—explosive vapors.....D	31
MILLER, EARLE C.	
Biography.....Ap	108
Elected Fellow of ASME.....Ap	108
MILLER, FRANK DANA	
Obituary.....Ap	113
MILLER, H. A.	
Sheet-metal perforating using a numerically controlled turret punch press (A).....S	77
MILLER, JOHN W.	
Computers in manufacturing engineering (A).....S	77
MILLER, RALPH HANSEN	
Biography.....Jl	91
Elected Fellow of ASME.....Jl	91
Using the fuel-air ratio as a basis for rating of turbocharged 4-cycle diesel engines (A).....S	74
MILLING. <i>See</i> METAL CUTTING	
MILLSAUGH, WILLIAM HULSE	
Obituary.....My	123
MIMS, W. H.	
Some significant diesel-electric locomotive repair cost trends (A).....O	72
MINDLIN, R. D.	
Dispersion of axially symmetric waves in elastic rods (A).....Je	77
Extensional waves along the edge of an elastic plate (A).....My	90
MINIATURIZATION	
Microminiaturization assembly techniques (A).....O	68
MINING. <i>See also</i> EXPLOSIVES	
World's biggest shovel in motion pictures.....D	83
MINKOWICZ, W. J.	
Heat transfer and skin friction for turbulent boundary-layer flow longitudinal to a circular cylinder (A).....Ja	73
MISODA, JOHN	
Correlation of Reynolds-number effect for a family of small centrifugal compressors (A).....Ag	65
MISSILE CRANES. <i>See</i> MATERIALS HANDLING	

(A) denotes Abstract; (AC) Author's Closure;
(BR) Book Review; (C) Correspondence;
(D) Discussion; (Ed) Editorial

MISSILES	
Air-vacuum missile launching.....Je	40
MITCHELL, WILL, JR.	
Fuel cells: the role of a designer in a new art (A).....N	77
MOCKOVCIK, JOHN, JR.	
Engineering an earth satellite.....My	48
MODELS. <i>See also</i> PLANT LAYOUT	
Mathematical models for value engineering (A).....S	76
Spray mold technique (A).....Ja	51
MODULAR IRON. <i>See</i> CAST IRON	
MOELLER, CALVIN E.	
New research findings on thermophysical properties and uses of insulating materials (A).....O	70
MOHUN, WILLIAM H.	
Blackall Machine Tool and Gage Award 1961.....Ja	101
MOISES, RAYMOND	
Transition from slug to homogeneous two-phase flows (A).....Mr	79
Two-phase flow through a vertical venturi (A).....N	82
MOLDS	
Spray mold techniques (A).....Ja	51
MOLITOR, JEROME H.	
Utilization of electric thrust devices for spacecraft propulsion (A).....Jl	61
MOLLIER, RICHARD	
Richard Mollier—100th anniversary.....D	38
MONCHER, F. L.	
Aircraft pumps for extreme environments (A).....Jl	62
MONDT, JAMES R.	
Vehicle gas turbine periodic-flow heat exchanger solid and fluid temperature distributions (A).....Ag	69
MONORAILS	
New hope for the crushed commuter.....N	29
MONTEITH, ALEXANDER C.	
Recipient of the 1962 Edison Medal.....F	93
MONTGOMERY, J. R.	
Plastic coating rejuvenates storage tanks.....S	38
MONTGOMERY, PETER W.	
Calibration of Bridgman anvils—a pressure scale to 125 kilobars (A).....F	76
MOORE, PAUL BYRON	
Obituary.....N	113
MOORE, W. T.	
Pressurized water reactor with spectral shift control (A).....My	80
MORDFIN, LEONARD	
Decisions that face ASME (C).....Ap	86
MORLOCK, H.	
What to do about gas-turbine noise (A).....Ag	69
MORRASE, J.	
Gas-turbine peaking power plants and future outlook (A).....Ag	67
MORRIS, FREDERICK	
Developments in the state of the art of regenerable solid absorbent CO ₂ removal systems (A).....Ag	62
MORSE, R. E.	
Instrumentation in food industry (A).....Jl	68
MORSE, S. L.	
Approach to automatic data taking in field testing boilers (A).....Je	66
MORSEKOFF, SIMON V.	
Obituary.....Jl	97
MOTOR VEHICLES	
Adhesive bonded autos (A).....O	58
Automatic safety belt (A).....O	67
Crankcase ventilation system required (A).....Jl	48
Living room on wheels (A).....Mr	58
Multimotion cart—the story of Omni-Drive (A).....Ap	60
Packaging the passenger—design for collision project survival car II (A).....Ap	78
Steam-powered truck (A).....Mr	68
Turbine-powered auto wheels (A).....O	56
MOVING WALKERS. <i>See</i> TRANSPORTATION	
MOYER, W. B.	
Interim report on dust louvre inertial separator application on 8500-hp U.P.R.R. gas-turbine locomotive (A).....Ag	67
MUELLER, T. J.	
On the separation, reattachment, and redevelopment of incompressible turbulent shear flow (A).....Jl	63
MUENZINGER, FRIEDRICH OSKAR AUGUST	
Obituary.....F	110
MUGELE, RAYMOND A.	
Evaluation of computer control for integrated refineries (A).....Ja	71
MULLER, FERDINAND HARRY	
Obituary.....D	97
MULLER, FRED, JR.	
Domestic and international progress in the standardization of freight containers (A).....D	72

MULLER, HENRY NICHOLAS, JR.	
Biography.....O	106
Elected Fellow of ASME.....O	106
MULTIANVIL DEVICES. <i>See</i> HIGH-PRESSURE RESEARCH	
MUND, MARK G.	
Gas-turbine air-cleaner dilemma (A).....Ag	68
MUNDY, JOHN N.	
Use of melting points for measuring pressure in high-pressure, high-temperature vessels (A).....F	78
MURASEW, ALEXANDER	
State of the art in bipropellant reaction-control systems (A).....Jl	60
MURDOCK, J. W.	
Steady-state thermal analysis of a thermometer well (A).....Je	65
MURPHY, THOMAS E.	
Gas-turbine air-cleaner dilemma (A).....Ag	68
MURRAY, S. F.	
Using chemical and physical properties of material to aid in lubrication (A).....N	78
MURRAY, W. D.	
Effect of spacewise lumping on the solution accuracy of the one-dimensional diffusion equation (A).....Je	76
MYCOFF, R. A.	
Nuclear stations in operation—Shippingport (D).....Ja	79
MYERS, CARL O.	
Obituary.....Ag	97
MYERS, J. G.	
Removal of sulfur oxides from flue gas with alkali alumina at elevated temperatures (A).....D	68
MYERS, MARK	
Contribution to calibration of high-pressure systems from studies in opposed-anvil apparatus (A).....F	76
MYNDESE, CHAUNCEY NICLIN	
Obituary.....Ag	97
N	
NADAI, ARPAD LUDWIG	
Obituary.....S	104
NAGHD, P. M.	
Finite twisting and expansion of a hole in a rigid/plastic plate (A).....N	87
NAHRUP, WALTER S.	
More efficient filing and printing of drawings (A).....N	78
NAPLES, R. F.	
Application of jet gas turbines to pipeline pumping service (A).....D	71
NATIONAL ACADEMY OF ENGINEERING	
National Academy of Engineering established.....Je	94
NATIONAL POWER CONFERENCE	
National Power and Petroleum Mechanical Engineering conference assess government influence in industry.....N	100
NATURAL GAS. <i>See</i> FUEL CELLS	
NAVAL ENGINEERING. <i>See</i> MARINE ENGINEERING	
NAVARATNA, D. R.	
Vibrations of a rectangular plate with concentrated mass, spring, and dashpot (A).....My	90
NAYAK, N.	
Mechanism of chip curl and its importance in metal cutting (A).....Ap	83
NEEDY, JOHN ALFRED	
Obituary.....F	110
NEESOM, C. H.	
Mobile belt conveyors: mechanical and structural design.....F	48
NELSON, C. T.	
Constructing low-leakage reactor housing using conventional materials (A).....My	79
NEUBST EFFECT. <i>See</i> THERMOELECTRICITY	
NEUBST GENERATOR. <i>See</i> THERMOMAGNETISM	
NEUBEN, K. F.	
Expansion of a very low quality two-phase fluid through a convergent-divergent nozzle (A).....Jl	62
NEWCOMB, FRANKLIN LE ROY	
Obituary.....Ap	113
NEWCOMB, ROBERT SCOTT	
Obituary.....F	110
NEWCOMER, G. H.	
Fracture (D).....N	91
NEWMAN, D. H.	
Redetermination of the freezing pressure of mercury using improved apparatus and technique (A).....F	82
NEWMAN, E. SYDNEY	
Resigns mechanical engineering post.....Je	95

- NEWMAN, LOUIS EDWARD
Biography.....D 93
Elected Fellow of ASME.....D 93
Research in management—needs, projects, and procedures (A).....Ag 70
- NEWMARK, NATHAN MORTIMORE
Biography.....Je 100
Elected Fellow of ASME.....Je 100
- NICOLL, W. B.
Laminar flow heat transfer to a gas with large temperature differences (A).....Mr 77
- NIELSEN, J. N.
Theory of flexible aerodynamic surfaces (A).....N 85
- NIELSEN, M. F.
Hydrogen embrittlement—a case history (A).....D 62
- NOISE. *See also* GAS TURBINES
Sound suppressor design-methods of establishing noise levels (A).....D 69
- NONDESTRUCTIVE TESTING
More direct approach to setting acceptance standards for nondestructive tests (A).....D 70
Status of ultrasonic inspection for pipe and pipelines (A).....D 71
Theoretical approach to the evaluation of ultrasonically detected flaws in rotor forgings (A).....Ja 69
X-rays on the move (A).....N 68
- NONLINEAR SYSTEMS. *See also* VIBRATION
Stability of the normal modes of nonlinear systems with polynomial restoring forces of high degree (A).....Je 77
- NORBURY, J. F.
Measurement of the effects of viscosity on aerofoil lift using the electrolytic tank (A).....Je 68
- NORDGREN, R. P.
Finite twisting and expansion of a hole in a rigid/plastic plate (A).....N 87
- NORRIS, HENRY LEE
Obituary.....Je 107
- NOTTAGE, HERBERT B.
Alternating current thermoelectric generator (A).....Je 64
- NOVOSAD, T. L.
Today's balanced-pressure indicator—its application (A).....Je 66
- NOWAK, E. S.
Rational equation of state for water and water vapor in the critical region (A).....N 84
- NOWINSKI, JERRY L.
Nonlinear transverse vibrations of a spinning disk (A).....N 87
- NOZZLES
Expansion of a very low quality two-phase fluid through a convergent-divergent nozzle (A).....Jl 62
Theory of pulsating flow in conical nozzles (A).....Je 77
Thrust nozzles for supersonic transport aircraft (A).....Ag 68
- NUCLEAR BLASTS. *See* SEISMOLOGY
- NUCLEAR ENERGY
ASME Pressure Vessel Code for the nuclear age.....F 97
World's first nuclear reactor celebrates 20th anniversary.....Ja 84
- NUCLEAR POWER. *See* EXPLOSIVES
- NUMERICAL CONTROL. *See also* MACHINE TOOLS
Use of computers in numerical control (A).....S 77
- NUHM, MELACH JOSEPH
Obituary.....My 123
- NYLON. *See* PLASTICS
- O**
- OATLEY, HENRY BIGELOW
Obituary.....Mr 111
- ORA, R.
Theory for supercavitating flow through an arbitrary form hydrofoil (A).....Ag 69
- O'BRIEN, R. N.
Recovery of vanadium from petroleum ash (A).....F 83
- OCEAN WAVES. *See* WAVE MOTION
- O'DONNELL, DANIEL
New deal in depreciation (AC).....Ag 75
- O'DONNELL, W. J.
Fatigue strength of members containing cracks (A).....D 68
Stresses and deflections in built-in beams (A).....Jl 66
- OFFNER, WALTER W.
Biography.....F 103
Elected Fellow of ASME.....F 103
- ONLASON, GUNNAR O.
Cascade performance from tests with wheel of axial outlet (A).....Je 75
Low aspect ratio turbines (A).....Je 75
Supersonic turbines (A).....Je 75
- OIL FUEL. *See* LOCOMOTIVES—DIESEL
- OKAY, PERRY
Obituary.....S 103
- OLDENBURGER, RUFUS
Simplification of hydraulic line dynamics by use of infinite products (A).....Je 78
- OLIVADOTTI, P. O.
Coal slurry-firing at the Werner Station (A).....Ja 69
- OLIVE, RYLAND WRENN
Obituary.....Ag 97
- OLSON, EDWARD S.
Cotton can produce elastic knitted fabrics (A).....Ag 66
- OMNI-DRIVE. *See* MOTOR VEHICLES
- ONAT, E. T.
Analysis of plastic shallow conical shells (A).....My 91
Finite deformations of a rigid perfectly plastic arch (A).....Ap 81
- O'NEILL, JAMES LAWRENCE
Obituary.....O 108
- ONO, KAZUYOSHI
Vibration of an infinitely extending plate resting on an elastic foundation (A).....N 88
- ONOE, MORIO
Dispersion of axially symmetric waves in elastic rods (A).....Je 77
- OPPOSED-ANVIL DEVICES. *See* HIGH-PRESSURE RESEARCH
- OPTICS. *See* PHOTOGRAPHY
- ORAN, F. M.
What to do about gas-turbine noise (A).....Ag 69
- ORBITS. *See* SPACE VEHICLES
- ORE CARRIERS. *See* SHIPS
- ORIFICES. *See* FLUID METERS
- OSCILLATION. *See* HEAT TRANSFER
- OSCILLOGRAPHES. *See* COMPRESSORS
- OSGOOD, CAROL EUGENE
Obituary.....D 97
- OSTERLE, J. F.
On the choice of coordinates used to describe thermoelectric and thermomagnetic generators (A).....O 79
Thermoelectric-hydromagnetic pump (A).....N 80
- OSTRACH, S.
Thermal instability of completely confined fluids inside some particular configurations (A).....Ja 75
- OVERSEAS SURVEY; ENGINEERING PROGRAMS ABROAD
.....Je 64, F 72, Mr 68, Ap 74, My 74, Je 60, Jl 56, Ag 58, S 70, O 66, N 74, D 60
- OWENS, J. E.
Hallam Nuclear Power Facility startup program (A).....Ja 68
- OXLEY, P. L. B.
Mechanics of metal cutting for a material of variable flow stress (A).....Ap 83
Rate of strain effect in metal cutting (A).....Ap 82
Rate of strain effect in metal cutting (A).....Jl 69
- P**
- PACCITTI, TERCIO
Stability of the normal modes of nonlinear systems with polynomial restoring forces of high degree (A).....Je 77
- PACKAGING. *See also* WEIGHTS AND MEASURES
Plastic packaging (A).....My 62
Strapping stays tight (A).....Je 52
- PAGING SYSTEMS. *See* RADIO COMMUNICATION
- PAN, C. H. T.
Comparison between theories and experiments for the threshold of instability of rigid rotor in self-acting, plain-cylindrical journal bearings (A).....O 73
Static and dynamic characteristics of self-acting, partial-arc, gas journal bearings (A).....D 66
- PANARELLI, JOSEPH E.
Interaction of pressure, end load, and twisting moment for a rigid-plastic circular tube (A).....N 86
- PANER, JULIAN R.
Elastomeric joint sealants (A).....Je 72
- PAPENFUS, CHARLES AUGUST
Obituary.....D 97
- PAQUIN, R. A.
Modification and calibration of a tetrahedral anvil apparatus (A).....F 81
- PARAMAKIAN, JOHN
Hydraulic turbine operation difficulties (A).....Je 70
- PARDOE, WILLIAM SPRAGUE
Obituary.....Jl 98
- PARIS, P.
Critical analysis of crack propagation laws (A).....My 89
- PARKER, C. W.
Use of Canadian crudes in locomotive diesel engines (A).....Jl 70
- PARKER, DARRELL SMITH
Obituary.....Jl 98
- PARKER, WALTER B.
Preventive maintenance in boiler safety.....N 42
- PARMAKIAN, JOHN
Stresses in a hydraulic turbine stay ring (A).....Je 71
- PARTNIDGE, EVERETT P.
Hydrogen damage in power boilers (A).....D 62
- PASCHEKIS, V.
Automatic network analog computer for the solution of the biharmonic equation (A).....Je 77
- PARLAY, P. R.
Buckling of drill pipe in an inclined hole (A).....D 69
Evaluation of the fixed point method of vibration analysis for a particular system with initial damping (A).....My 86
Steady-state flow of a gelling material between rotating concentric cylinders (A).....N 86
- PATENTS
In case of invention (D).....Ap 87
You ought to patent that (BR).....Ap 89
- PATILLO, JOE L., JR.
Obituary.....Ag 97
- PATTON, R. E.
Design and operation of automatic burner-control system for West Texas Utilities Company—Oak Creek Power Station (A).....Ja 70
- PAUL, B.
Linear bending theory of laminated cylindrical shells under axisymmetric load (A).....Ja 74
- PAUL, IGOR
Evaluation of energy and power requirements for externally powered upper-extremity prosthetic and orthopedic devices (A).....Ap 78
- PEARCE, C. T.
The engineer in field service (A).....Ja 78
- PEARBALL, G. W.
Size and speed effects from lubricant breakdown in plastic compression (A).....Je 73
- PEARSON, C. E.
Digital computer program for the general axially symmetric thin-shell problem (A).....Ja 74
- PEASE, ALVAN C.
Sound suppressor design-methods of establishing noise levels (A).....D 69
- PEAT. *See* FUELS
- PEKLENIK, JANEZ
Contribution to a correlation theory for the grinding process (A).....S 78
- PENBLETON, T. K.
300 hp recuperative gas turbine for EFL energy system application (A).....Ag 67
- PENDULUMS. *See* VIBRATION
- PENNING, F. A.
Response of a free-standing or anchored explosive-forming assembly (A).....Jl 67
- PEPPARD, W. D.
Airport luggage handling (A).....Jl 61
- PERLMUTTER, M.
Laminar heat transfer in a channel with unsteady flow and wall heating varying with position and time (A).....Ja 75
Monte Carlo solution of thermal transfer through radiant media between gray walls (A).....Jl 72
Radiant transfer through a gray gas between concentric cylinders using Monte Carlo (A).....N 82
- PERSONNEL WORK
Managing technical personnel (A).....Ap 69
- PERT. *See* MANAGEMENT
- PESCE, G. V.
Avoid the voids! A discussion of cavitation in rotary hydraulic pumps (A).....Ag 70
- PETELA, R.
Exergy of heat radiation (A).....N 79
- PETER, WALTER J.
Obituary.....O 108
- PETERS, ALBERT H.
Filters for reactor containment.....S 46
- PETERS, BRAINARD J., JR.
Operation of a single-stage flash evaporator in the heat cycle of a utility unit (A).....Jl 71
- (A) denotes Abstract; (AC) Author's Closure; (BR) Book Review; (C) Correspondence; (D) Discussion; (Ed) Editorial

PETERS, W. W.	Locomotives: a new design approach to engine cooling (AC).....	Ja	80
PETERSON, M. B.	Using chemical and physical properties of material to aid in lubrication (A).....	N	78
	Maritime administration gas-turbine program (A).....	Ag	69
PETERSON, RUDOLPH EARL	Biography.....	Ag	91
	Nominated for Director.....	Ag	91
PETKUS, J. J.	Spontaneous combustion of oil-soaked thermal insulations (A).....	D	68
PETROLEUM INDUSTRY. See also DUST COLLECTORS, ENGINES—GAS	Estimating petrochemical plant costs from flow sheets (A).....	D	70
	Global oil production up (A).....	Ja	53
	Optimization of gasoline plants using mathematical programming (A).....	Ja	71
	Recovery of vanadium from petroleum ash (A).....	F	83
PETROLEUM PIPELINES	New developments in determining BS&W (A).....	Ja	71
PETROLEUM REFINING. See also SAFETY ENGINEERING	Evaluation of computer control for integrated refineries (A).....	Ja	71
PETROLEUM TRANSPORTATION	Underwater oil unloading (A).....	D	52
PETROLEUM—WELL EQUIPMENT	Aluminum in oil and gas drilling operations (A).....	D	68
	Analytical study of subsurface locking mandrels (A).....	D	69
	Buckling of drill pipe in an inclined hole (A).....	D	69
	Recent improvements in sucker-rod joint design (A).....	Ja	72
PETTIT, R. C.	Highly efficient steam-turbine gas-turbine cycle (A).....	Ag	68
PEW, JOSEPH NEWTON, JR.	Obituary.....	S	104
PFANNKAM, ROY ALTON	Obituary.....	Jl	98
PREFFER, C.	Performance of photovoltaic cells at high radiation levels (A).....	Jl	65
PRENINGER, H.	Operating results with gas turbines of large output (A).....	Jl	60
PRESDORFF, O. H.	Operating experiences and data of two 20,000-kw gas turbines at El Convento (A).....	Jl	58
PRELAN, R. M.	Load capacity of short journal bearings with oscillating effective speed (A).....	D	66
PHILBRICK, HERBERT SHAW	Obituary.....	N	113
PHILLIPS, WILLIAM H.	Langley Research Center simulation facilities for manned space missions (A).....	O	72
PHINNEY, RALPH	Graphical solution of quasi-one-dimensional foam flows (A).....	N	84
PHOTOGRAPHY. See also INDUSTRIAL FILMS	Fiber optics aid photography (A).....	Ja	61
	Movies in a minute (A).....	Ag	52
	Satellite camera (A).....	Ag	59
	Superimposing multiple channel data on a high-speed cine record (A).....	D	70
	Ultrahigh-speed photography (A).....	Mr	60
PHOTOVOLTAIC DEVICES. See SOLAR ENERGY			
PHYSIOLOGY	The human machine—work & environments.....	D	22
	Human response to thermal stress and space travel (A).....	Ag	63
PICONE, F. F.	Radiotracer test facility for hideout measurements under boiler conditions (A).....	Jl	72
PIERCE, F. J.	Turbulent flow at the plane of symmetry of a collateral three-dimensional boundary layer (A).....	Jl	62
PILE DRIVERS	Sonic pile driver (A).....	Mr	59
PINKUS, O.	Unsteady forces due to propeller-appendage interaction (A).....	N	85

(A) denotes Abstract; (AC) Author's Closure;
(BR) Book Review; (C) Correspondence;
(D) Discussion; (Ed) Editorial

PIPE AND PIPING. See also PETROLEUM—WELL EQUIPMENT	Cement-lined pipe.....	Mr	46
	Engineering properties and design of ductile-iron pipe in underground pressure service (A).....	Je	74
	Gas industry receives new edition of Gas Transmission and Distribution Piping Code.....	My	118
	Interpretations of the Code for Pressure Piping.....	Je 104, Ag	65
	Joint for steel pipes (A).....	D	60
	Preparation and use of cement-lined pipe (A).....	Ja	72
	Some secondary effects in a simple piping structure under heating (A).....	N	89
	Stresses during shipping, handling, and laying thin-wall pipe (A).....	Mr	76
PIPELINES. See also GAS PIPELINES, MATERIALS HANDLING, PETROLEUM PIPELINES	Application of jet gas turbines to pipeline pumping service (A).....	D	71
	Bending mandrel and CO ₂ welding on the pipeline (A).....	D	71
	Digital-computer design of pipelines (A).....	D	71
	Electrical strip heats pipelines (A).....	N	71
	Liquid coal pipeline (A).....	F	63
	Modernizing existing pipeline integral engine-compressor units (A).....	D	71
	Radioactive tracers speed pipeline cleaning (A).....	D	51
	Safe new method for the internal cleaning of process equipment and pipelines (A).....	S	75
	Status of ultrasonic inspection for pipe and pipelines (A).....	D	71
	Study of full-branch weldments (A).....	D	71
PIPING SYSTEMS	Flexibility analysis of three-dimensional pipeline networks (A).....	D	67
PIPKIN, A. C.	Minimum-weight design for pressure vessels reinforced with inextensible fibers (A).....	Jl	69
PIRACANE, V. L.	Application of numerical mapping to the Muskhelishvili method in plane elasticity (A).....	O	80
PISTON-CYLINDER DEVICES. See HIGH-PRESSURE RESEARCH			
PITRUS, J. J.	Turbojet/turbofan engines: a performance report (D).....	Ag	76
PLANT LAYOUT	Low-cost model planning (A).....	Ja	53
PLASMA	Big plasma beam (A).....	S	66
PLASMA ENGINES	Analysis of factors influencing plasma-engine performance (A).....	Jl	62
PLASTICITY. See also DEFORMATION, METAL CUTTING	Bilinear theories in plasticity and an application to two-dimensional wave propagation (A).....	N	85
PLASTICS. See also METAL COATING, PACKAGING, PRODUCT DESIGN	Determination of the effect of creep in plastics on bolted plastic-metal assemblies (A).....	S	78
	Foam blocks for London bridge (A).....	Mr	71
	For plastics: the ram extruder.....	Jl	36
	New material—new vehicle (A).....	Jl	46
	New nylons for mechanic parts (A).....	D	50
	Plastic film—"bubble control" (A).....	O	58
	Polyurethane now in sheet form (A).....	Ja	59
	Reliability of plastics (A).....	S	75
	Rubber & plastics—for process plants.....	O	46
	Some observations on the mechanics of orthogonal cutting of Delrin and Zytel plastics (A).....	O	76
PLATES. See also HEAT TRANSFER, VIBRATION, WAVE MECHANICS	Elastoplastic stress and strain distribution in a finite plate with a circular hole subjected to unidimensional load (A).....	Ap	81
	Extension of iteration method for determining strain distributions to the uniformly stressed plate with a hole (A).....	Ap	80
	Finite twisting and expansion of a hole in a rigid plastic plate (A).....	N	87
	Flexure by a concentrated force of the infinite plate on a circular support (A).....	My	90
	Flexure of a circular plate with a ring of holes (A).....	Ja	73
	Load-carrying capacities of simply supported rectangular plates (A).....	O	79
	Thermoelastic dissipation in vibrating plates (A).....	N	85
	Vibration of an infinitely extending plate resting on an elastic foundation (A).....	N	88
PLATT, A.	Measurement of the effects of viscosity on aerofoil lift using the electrolytic tank (A).....	Je	68

PLATUS, DAVID L.	Plane-stress problem for a doubly connected region in which the medium undergoes elastic and creep deformation (A).....	N	88
PLESSET, MILTON S.	Pulsation method for generating cavitation damage (A).....	Je	71
PLUNKETT, ROBERT	Vibration response to linear damped complex systems (A).....	Je	76
PNEUMATIC DEVICES. See also SERVOMECHANISMS	Air motor reduces hazard in coal conveyers (A).....	O	59
	Fluid logic: a new computer technique (A).....	Ja	47
	Method for determining the Laplace transform of a pneumatic nozzle-flapper combination (A).....	Je	78
PNUELLI, D.	Thermal instability of completely confined fluids inside some particular configurations (A).....	Ja	73
POISSON'S EQUATION. See MATHEMATICS			
POLISHING	Investigations of electrolytic jet polishing at high current densities (A).....	Je	73
POLLACK, JOHN L.	Carbon-arc solar simulator (A).....	Jl	65
POLLOCK, W. A.	Seven years of experience with aluminum condenser and heat-exchanger tubes (A).....	My	81
POMERANTZ, M. L.	Film boiling on a horizontal tube in increased gravity fields (A).....	N	79
POOL, E. B.	Minimization of surge pressure from check valves for nuclear loops (A).....	My	78
	Prediction of surge pressure from check valves for nuclear loops (A).....	My	78
POPE, HAROLD LINDER	Obituary.....	Mr	111
POPOV, J. P.	Turbocharging a small medium-speed, two-cycle, opposed-piston diesel engine (A).....	S	74
PORTER, DAVID B.	Research in management—needs, projects, and procedures (A).....	Ap	79
PORTER, JOHN C.	Graphical solutions in Cartesian coordinates (A).....	O	77
PORTER, ROBERT	Obituary.....	O	108
PORWIT, A. J.	Prediction of surge pressure from check valves for nuclear loops (A).....	My	78
POSPITILE, RICHARD W.	Effect of an aluminum condenser on boiler water (A).....	My	82
POTTER, J. H.	Essay on the nature of steam—1 (A).....	Je	66
POWELL, JAMES R.	Magnetic road: a new form of transport (A).....	S	78
POWER. See also ENERGY CONVERSION	Finnish National Power Review (A).....	Ag	58
	Interior Secretary Udall urges technological unification in energy race with Soviet Union.....	Ja	87
	National Power and Petroleum Mechanical Engineering conference assess government influence in industry.....	N	100
	U. S. versus USSR power (C).....	N	90
POWER PLANTS. See also MAGNETOHYDRODYNAMICS	Highly efficient steam-turbine gas-turbine cycle (A).....	Ag	68
	Motorized gas turbogenerator (A).....	O	67
	Power engineering in the USSR.....	Ag	27
	Primary power from gas prime movers (A).....	S	74
	Systems for extracting and utilizing engine rejected heat (A).....	S	74
	Using jet engines to generate electricity.....	Mr	40
POWER PLANTS—GAS TURBINE	Economics and operating results: prototype aircraft and jet engine-electric power plant (A).....	Ag	67
	Gas-turbine peaking power plants and future outlook (A).....	Ag	67
	300 hp recuperative gas turbine for EFL energy system application (A).....	Ag	67
POWER PLANTS—HYDROELECTRIC. See also VALVES	Measurements of auto-oscillation in a hydroelectric supply tunnel and penstock system (A).....	Je	70
POWER PLANTS—INDUSTRIAL	Improving electric system reliability (A).....	S	75

POWER PLANTS—NUCLEAR. See also BEARINGS, METAL CREEP, RADIOACTIVITY, SHIPS, SPACE VEHICLES		
Advanced gas-cooled reactor (A).....	Je	62
AEC nuclear superheat program (A).....	My	79
Atomic crossroads—U. S. A.....	Je	36
Breeding nuclear power (A).....	O	34
Central station BWR nuclear power plant (A).....	My	80
Combined effects of stress and irradiation on structural materials (definition and approach).....	S	78
Constructing low-leakage reactor housing using conventional materials (A).....	My	79
Containment for boiler water reactors (A).....	My	79
Filters for reactor containment.....	S	46
Hallam Nuclear Power Facility startup program (A).....	Ja	68
High performance sodium graphite reactor power plant (A).....	Je	80
Joint Committee on Atomic Energy hears both sides of the nuclear power story.....	My	103
Large nuclear power plants—their commercial availability, operational predictability and economics (A).....	My	80
New fast breeder reactor in Scotland (A).....	Ja	64
Nonnuclear testing at the Enrico Fermi atomic power plant (A).....	Ja	68
Nuclear power cost decreasing (A).....	My	74
Nuclear power prediction for Europe (A).....	My	77
Nuclear stations in operation—Shipping port (D).....	Ja	78
Nuclear-thermionic power plant (A).....	Je	56
Pressurized water reactor with spectral shift control (A).....	My	80
Role of a superheat power experiment in the development of supercritical steam nuclear-fired power plants (A).....	My	79
Site requirements for large nuclear stations (A).....	My	80
Startup experience with the plutonium recycle test reactor (A).....	My	80
Some nuclear safety considerations of the BONUS reactor power station design (A).....	My	79
Study of reactor kinetics (A).....	My	81
Techniques of atomic reactor plant decontamination (A).....	Je	71
Thermonuclear fusion program advances (A).....	Je	57
Vigorous U. S. leadership in civilian nuclear power urged by Twentieth Century Fund study.....	Ap	97
POWER PLANTS—STEAM. See also AUTOMATIC CONTROL, BOILER CORROSION, COAL, COAL HANDLING, CONDENSERS, FRESHWATER TREATMENT, FUELS, STEAM TURBINES, WATER TANKS		
Computer program for selecting power-plant design parameters (A).....	Je	71
For power plants: variable-pressure operations?.....	Ag	63
Formulas for digital computation of current incremental heat rate (A).....	Je	65
Improved station heat rate with variable-pressure operation (A).....	Je	64
Incremental heat-rate testing program (A).....	Je	64
Method for predicting the performance of steam turbine-generators—(16,500 kw and larger) (A).....	Je	64
100, 200, and 400-mw steam and gas-turbine power plants (A).....	D	67
Operation of a single-stage flash evaporator in the heat cycle of a utility unit (A).....	Je	71
Performance testing of large steam generators (A).....	F	85
Review and preview of kilowatt capacity of large steam turbine generator sets (A).....	Ap	69
Sewaren number 5 (A).....	Je	53
World's highest capacity roadable steam generator (A).....	F	84
POWER PRESSES		
Faster steel ring forging (A).....	D	55
Metal powder press (A).....	Je	57
POWER SYSTEMS		
Extrahigh voltage plants (A).....	Mr	60
North American power systems interconnection committee formed.....	Mr	80
POWLEY, H. R.		
Analysis of factors influencing lubricating-oil contamination in diesel engines (A).....	S	74
PRAGER, WILLIAM		
Biography.....	Je	100
Elected Fellow of ASME.....	Je	100
PRAOT, ERNEST WILLIAM		
Obituary.....	Je	107
PRESCOTT, ROBERT DAN		
Obituary.....	Ag	97
PRESSURE DROP. See FLOW OF FLUIDS		
PRESSURE SEALS. See HIGH-PRESSURE RESEARCH		
PRESSURE VESSELS. See also METAL FATIGUE, SHELLS		
Minimum-weight design for pressure vessels reinforced with inextensible fibers (A).....	Je	69
Nickel-steel tank tests at minus 320.....	Je	73
Plastic analysis of radial outlets from spherical pressure vessels (A).....	D	70
Prestressed fiber-metal cylindrical pressure vessels (A).....	Ag	63
Strength of thick walled cylindrical pressure vessels (A).....	Mr	75
PRICE, ROBERT BRADLEY		
Obituary.....	F	110
PRIMROSE, E. J. F.		
Gear five-bar motion.....	Je	77
Part 1—Gear ratio minus one (A).....	Je	77
Part 2—Arbitrary commensurate gear ratio (A).....	Je	77
PRODUCT DESIGN		
Applications of advanced electronic components in product design (A).....	O	70
New design opportunities with plastics (A).....	O	71
System—PERT in product design.....	My	35
PRODUCT FAILURE		
Major causes of product failure and their prevention (A).....	O	69
PRODUCTION CONTROL		
Structure and challenge of production planning (A).....	Je	74
PRODUCTION ENGINEERING		
Industry-sponsored research: is more government support needed in production engineering research?.....	Ag	82
International Conference on Production Engineering Research, 1963.....	My	114
PROFITABILITY ANALYSIS. See MANAGEMENT		
PROPELLANTS. See ROCKET FUELS		
PROPELLERS		
Unsteady forces due to propeller-appendage interaction (A).....	N	85
PROST, H. E.		
Use of a computer in production and inventory-control systems (A).....	S	77
PROSTHETIC DEVICES		
Evaluation of energy and power requirements for externally powered upper-extremity prosthetic and orthopedic devices (A).....	Ap	78
PUISHERS, ALFONS		
In case of invention (D).....	Ap	87
You ought to patent that (BR).....	Ap	89
PULLER, GEORGE		
Obituary.....	N	113
PULVERIZED COAL. See COMBUSTION, GAS TURBINES		
PUMPS. See also CAVITATION, DREDGE PUMPS, FLOW OF FLUIDS, LIQUID METALS, PIPELINES		
Electromagnetic pump (A).....	My	70
Investigation of a shear-force pump (A).....	My	83
Pressure fluctuations and fatigue stresses in storage pumps and pump turbines (A).....	Je	63
Pump-unit controller and safety device (A).....	My	83
Thermoelectric-hydromagnetic pump (A).....	N	80
PUMPS—AXIAL-FLOW		
Design and evaluation of an axial-flow impulse pump (A).....	Ag	72
Kaplan-type pumps for the City of Detroit (A).....	My	82
Note on the application of cascade theory to design of axial-flow pumps (A).....	My	82
PUMPS—CENTRIFUGAL		
Application of pressure and velocity criteria to the design of a centrifugal-pump impeller and inlet (A).....	Ag	72
NPSH suppression in centrifugal pumps (A).....	Ag	70
PUMPS—INJECTION		
Bronze injection pump problems—metal-lurgy? design? usage? (A).....	D	68
PUMPS—MULTIPLE-DISK		
Analytical and experimental investigation of multiple-disk pumps and compressors (A).....	My	83
PUMPS—ROCKET-ENGINE		
Design comments and experimental results for cavitation-resistant inducers up to 40,000 suction specific speed (A).....	Ag	72
PUNCHING		
Sheet-metal perforating using a numerically controlled turret punch press (A).....	S	77
PURDY, C. M.		
Fatigue strength of members containing cracks (A).....	D	68
PURDY, K. R.		
Viscous fluid flow under the influence of a resonant acoustic field (A).....	Mr	77
PURSEL, CLAUDE A.		
AEC nuclear superheat program (A).....	My	79
Q		
QUACKENBUSH, L. J.		
Shock waves and vibration in high-speed milling (A).....	Ap	84
QUALITY CONTROL		
Audio-visual systems: key to quality control.....	Ag	46
QUIRO, M. J.		
Langley Research Center simulation facilities for manned space missions (A).....	O	72
QUINN, ROLAND WILSON		
Obituary.....	S	104
R		
RABINOWICZ, E.		
Effect of surface energy on the wear process (A).....	O	73
RABINS, M. J.		
Torque capacity of friction devices with nonlinear frictional elements (A).....	Je	66
RADAR ANTENNAS		
Axial-load design for high-performance radar-antenna structures (A).....	Mr	74
Hydrostatic bearing for haystack (A).....	Mr	74
RADD, F. J.		
Nickel-steel tank tests at minus 320 (D).....	D	76
RADCKI, MICHAEL J.		
Obituary.....	My	123
RADTSKY, E.		
Determination of the effect of creep in plastics on bolted plastic-metal assemblies (A).....	S	78
RADIATION. See HEAT TRANSFER, SOLAR RADIATION		
RADIATORS		
Component thermal control via heat of fusion radiator.....	Je	58
RADIO COMMUNICATION		
Pocket paging system (A).....	Ag	55
RADIOACTIVITY. See also PIPELINES		
Fixing fission wastes in glass (A).....	S	71
Inspection of radioactive interiors (A).....	S	61
Neutron activation analysis (A).....	N	71
Radiation exposure studies (A).....	Ja	58
Radiotracer test facility for hideout measurements under boiler conditions (A).....	Je	72
RADIOGRAPHIC INSPECTION. See NONDESTRUCTIVE TESTING		
RADOVICIC, NICK A.		
Two-phase flow through a vertical venturi (A).....	N	82
RAIL CARS		
Space-age drive for rapid transit cars (A).....	S	78
RAILROAD BRAKES		
New concepts in freight-car brake rigging (A).....	Je	70
RAILROAD CARS		
Articulator for overseas loads (A).....	D	60
Cruel to mules? no, not to railroads (A).....	O	60
Fracture (D).....	N	91
Fracture of freight-car-truck side frames (Je).....	Je	43
Performance tests of long travel cushion underframes (A).....	O	72
RAILROAD CROSSINGS		
Grade crossing predictor (A).....	Ap	64
RAILROAD MECHANICAL ENGINEERING		
Progress in railway mechanical engineering, 1961-1962.....	Ag	37
RAILROAD TIES		
Prestressed concrete railroad ties (A).....	D	53
RAILROADS		
1963 IEEE-ASME Joint Railroad Conference.....	F	99
Some significant diesel-electric locomotive repair cost trends (A).....	O	72
RAINEY, ROBERT W.		
Manned space vehicles (A).....	Mr	73
RAISCH, WILLIAM C. E.		
Obituary.....	Ja	122
RANBERG, WALTER		
Biography.....	D	93
Elected Fellow of ASME.....	D	93
RAMBO, WILLIAM HUBER		
Obituary.....	Je	107
RAMJET. See AIRPLANE ENGINES		

(A) denotes Abstract; (AC) Author's Closure; (BR) Book Review; (C) Correspondence; (D) Discussion; (Ed) Editorial

RAMEY, J. W.		Effect of surface roughness on the total hemispherical and specular reflectance of metallic surfaces (A).....	O	76
RANCE, J. M.		Combustion control: key to better engine performance.....	My	55
		Gas compressor indicating—purpose, methods, results (A).....	S	72
RANNEY, J. P.		Optimization of damping of four configurations of a vibrating uniform beam (A).....	My	86
RAO, U. M.		Some observations on the mechanics of orthogonal cutting of Delrin and Zytel plastics (A).....	O	76
RAPPOPORT, ELIEZER		Use of melting points for measuring pressure in high-pressure, high-temperature vessels (A).....	F	78
RASCHER, G. J.		Design of simplified combustion control systems for supercharged steam generators (A).....	Ap	77
RATH, HOWARD G.		Tooting for precision welding (A).....	My	84
RAUDSIPP, EUGENE (Author)		Managing creative scientists and engineers (BR).....	S	81
RAWSON, ARTHUR JOY		Obituary.....	Ag	97
RAYMOND, M. H.		Geometrical effects in strain cycled aluminum (A).....	My	85
RAYNER, HOWARD		Coal analysis at Western Electric Company—Hawthorne Works (A).....	F	82
REACTORS.		See POWER PLANTS—NUCLEAR		
READ, GRANVILLE M.		Obituary.....	F	111
REASER, W. W.		Biography.....	Ag	84
		Elected Fellow of ASME.....	Ag	84
RECT, R. F.		Ballistic perforation dynamics (A).....	N	83
RECORDING SYSTEMS.		See PHOTOGRAPHY		
REDPATH, HUGH SMITH		Obituary.....	D	97
REFRACTORIES		Refractories in incinerator construction (A).....	My	87
REFRIGERATION		Popular heat sources for absorption refrigeration machines (A).....	S	72
REGENERATORS.		See HEAT-EXCHANGE EQUIPMENT		
REID, WILLIAM T.		Energy conversion (BR).....	Je	81
		International engineer (C).....	Ag	74
REIMER, ROBERT M.		Computation of the critical flow function, pressure ratio, and temperature ratio for real air (A).....	Jl	71
REINER, A. N.		Fatigue characteristics of open-end thick-walled cylinders under cyclic internal pressure (A).....	My	85
REISNER, ERIC		On the form of variationally derived sheet equations (A).....	N	86
REISWEBER, ROBERT C.		Supercharger design for a supercharged steam generator (A).....	Ap	76
RELIABILITY.		See also INSPECTION, POWER PLANTS—INDUSTRIAL		
		Joint AIAA-ASME Aerospace Reliability and Maintainability Conference.....	My	102
		Reliability—designing for reliability.....	Mr	38
REMOTE CONTROL		Supervisory control with digital data transmission (A).....	Ja	71
RESEARCH.		See also MANAGEMENT		
		Government money? (C).....	O	82, D
		Industry-sponsored research; is more government support needed in production engineering research?.....	Ag	82
		Laboratory in space.....	N	56
		NASA inaugurates university program.....	S	87
		News and Notes.....	Je	91
		Organizing complexity.....	Jl	22
		R & D—government or industry.....	O	30
		Reactor brings promise of progress.....	D	85
		The research dilemma (Ed).....	O	25
		Space research program.....	Ja	30
		Space sciences center at IITRI.....	S	87
		Thermophysical properties research center.....	S	87
		U. S.-USSR join in outer space program.....	Ja	87
		Use of U.S. Patent Office as research tool urged (A).....	Ap	96
REASONANCE.		See FLUID MECHANICS		
REYNOLDS, W. C.		Design-oriented optimization of simple tapered radiating fins (A).....	Mr	76
RHEOLOGY.		See LUBRICANTS		
RICE, WARREN		Analytical and experimental investigation of multiple-disk pumps and compressors (A).....	My	83
RICHARDSON, EDWARD ADAMS		Are we drowning in complexity? (D)....	My	92
RICHARDSON, P. D.		Viscosity of superheated steam up to 275 deg C. A refined determination (A).....	Mr	77
RICHMOND, O.		Gravity hopper design.....	Ja	46, (AC) Jl
RIDDLE, KENNETH WHITFORD		Obituary.....	My	123
RIDEOUT, T. R.		Gearing for higher operating speeds (A).....	N	78
RIDLEY, WALTER H.		Wet-finishing instruments and their application (A).....	Ag	66
REITZ, RICHARD C.		Government money? (C).....	D	74
RIFLEY, MILLS N.		Optimum maintenance stores and inventory control (A).....	S	75
RIVLIN, R. S.		Minimum-weight design for pressure vessels reinforced with inextensible fibers (A).....	Jl	69
ROAD SHOCK.		See TESTING MACHINES		
ROBBINS, KENNETH W.		Analytical study of subsurface locking mandrels (A).....	D	69
ROBBINS, P. B.		Description and calibration of a modified girde high-pressure, high-temperature apparatus (A).....	F	70
ROBERTS, J.		Incinerator refuse-residue and fly-ash materials handling (A).....	My	87
ROBERTSHAW, CLARENCE WILFRED		Obituary.....	D	97
ROBERTSON, C. F.		Design and evaluation of an axial-flow impulse pump (A).....	Ag	72
ROBINSON, C. C.		Effects of liquid-solid interfaces on the nucleation characteristics of cryogenic liquids (A).....	Ag	72
ROCKET FUELS		Fuel explosion test (A).....	N	65
ROCKETS.		See also SPACE VEHICLES		
		"Bob-tailed" rocket engine (A).....	O	58
		Controlled extinction of solid propellants (A).....	My	71
		Cooled hydrogen-fueled rocket (A).....	D	52
		Fluorine-oxygenized rocket systems for space propulsion (A).....	Ag	41
		Launching method for tomorrow's rockets.....	S	41
		Nuclear rocket power (A).....	O	54
		Performance of solid rocket motors with gas-particle flow (A).....	Ag	65
		Role of analysis in the evolution of a liquid rocket start system (A).....	Jl	61
		Some preliminary design considerations of turbopumps for liquid rocket engines (A).....	Ag	64
		Status and trends—space propulsion.....	Mr	48
		Testing the big rocket engines.....	F	28
ROD MILLS.		See IRON AND STEEL INDUSTRY		
RODERICK, MORGAN D.		Value engineering application in military practice (A).....	S	77
RODGERS, COLIN		Typical performance characteristics of gas turbine radial compressors (A).....	Jl	50
RODMAN, CLARKE A.		For filters: metallized fibers.....	F	54
RODS.		See HEAT TRANSFER		
ROLELANDS, C. J. A.		Viscosity-temperature-pressure relationship of lubricating oils and its correlation with chemical constitution (A).....	Jl	68
ROGERS, H. MORGAN		One hundred years of textile-mill engineering (A).....	O	73
ROGERS, J. R.		Process—the closed loop of design.....	My	32
ROGERS, SAMUEL E.		Government control of packaging (C).....	Ag	74
ROGERS, T. G.		Solution of viscoelastic stress analysis problems using measured creep or relaxation functions (A).....	Ap	81
ROLIK, HAROLD E.		Secondary-flow phenomena in stator and rotor-blade rows and their effect on turbine performance (A).....	Ag	68
ROSENOW, W. M.		Determination of forced-convection surface-boiling heat transfer (A).....	N	82
		Heat, mass, and momentum transfer inside frosted tubes—experiment and theory (A).....	N	83
ROLLER CHAINS.		See DRIVES		
ROLLING		Steady-state flow of a gelling material between rotating concentric cylinders (A).....	N	86
ROLON, JAVIER		Control of maintenance costs through planning techniques (A).....	S	75
ROMANO, FRANK		Stresses in short noncircular cylindrical shells under lateral pressure (A).....	Mr	80
ROMBOUGH, W. A.		Oil injection into blast furnaces (A)....	F	83
ROMIG, G. V.		Coal handling equipment with automatic reclaiming system—Charles P. Crane Station (A).....	F	82
RONAN, HAROLD R., JR.		New road to index error evaluation (A).....	Jl	67
ROSE, W. G.		Some corrections to the linearized response of a constant-temperature hot-wire anemometer operated in a low-speed flow (A).....	Mr	80
		Swirling round turbulent jet. 1—mean-flow measurements (A).....	Je	76
ROSENBERG, H. N.		Application of a SNAP reactor power plant to a manned orbiting space station (A).....	Ag	64
ROSENBERG, R. M.		Nonsimilar normal mode vibrations of nonlinear systems having two degrees of freedom (A).....	D	66
ROSENTHAL, P.		Search for new manufacturing processes (A).....	O	75
ROSS, A. L.		Clamped plate analogy for thermoelasticity (A).....	My	89
ROSS, GILBERT		Biography.....	Ja	91
		Elected Fellow of ASME.....	Ja	91
ROTH, BERNARD		Synthesis of path-generating mechanisms by numerical methods (A).....	My	88
ROTORS.		See also BEARINGS, STEAM TURBINES, VIBRATION		
		High-speed suspension formed by fully floating hydrodynamic radial and thrust bearings (A).....	Ag	67
		Stability and dynamics of rotors supported on fluid-film bearings (A).....	Je	76
ROWE, GILBERT T.		Power for the supersonic transport (AC).....	Jl	75
ROY, GEORGE M.		Central station BWR nuclear power plant (A).....	My	80
ROY, RUSTUM		Contribution to calibration of high-pressure systems from studies in opposed-anvil apparatus (A).....	F	76
RUBBER.		See also METAL COATING		
		Effect of dynamic strain amplitude on the dynamic mechanical properties of elastomers (A).....	Jl	64
		Rubber & plastics—for process plants.....	O	46
RUBIN, S.		Transmission matrices for vibration and their relation to admittance and impedance (A).....	Jl	60
RUCHLIS, HY		Science toys make future engineers.....	N	46
RUDY, JOHN F.		Unique welding processes for special design applications (A).....	N	77
RUFF, HERBERT		Obituary.....	My	123
RUSIA		Power engineering in the USSR.....	Ag	27
RUST PREVENTION.		See CORROSION		
RUTENBER, E. R.		Performance of medium-speed gas engines as applied to the petroleum industry (A).....	D	70
RUTE, L. O.		On the carbon-dioxide problem for manned past-Apollo space vehicles (A).....	Ag	66
RUUD, FREDERICK O.		Stresses in a hydraulic turbine stay ring (A).....	Je	71

(A) denotes Abstract; (AC) Author's Closure; (BR) Book Review; (C) Correspondence; (D) Discussion; (E) Editorial

S

SAFETY BELTS. See MOTOR VEHICLES

SAFETY ENGINEERING. <i>See also</i> BOILERS, ELECTRICAL FAILURES, MAINTENANCE, MOTOR VEHICLES, PUMPS		
Cart controls oil spills (A).....	S	65
Danger—explosive vapors.....	D	31
Design safety.....	My	117
Spontaneous combustion of oil-soaked thermal insulations (A).....	D	68
SABER, MIKLOS		
Junior Award.....	Ja	101
SAKAL, M. F.		
Emission of radiant heat from small-scale pulverized-coal flame (A).....	N	83
SALBU, E. O. J.		
Compressible squeeze films and squeeze bearings (A).....	D	65
SALLS, D. M.		
Application of jet gas turbines to pipeline pumping service (A).....	D	71
SALMON, MARTIN A.		
Plastic instability of cylindrical shells with rigid end closures (A).....	O	79
SAMELA, D. A.		
Thermal analysis of the Echo 11 canister assembly (A).....	JI	61
SAMPIETRO, A. C.		
Government money? (C).....	D	74
SAMPSELL, D. F.		
Transient response of gas turbine plant heat exchangers. Additional solution for regenerators of the periodic-flow and direct-transfer types (A).....	JI	58
SAMUELS, J. C.		
Dynamics of impulsively and randomly varying systems (A).....	My	91
SANDERS, NEWELL D.		
Space research program.....	Ja	30
SANDERS, ROBIN		
New hope for the crushed commuter.....	N	29
SANKARANARAYANAN, R.		
On the dynamics of plastic spherical shells (A).....	My	89
SANDWICH CONSTRUCTION. <i>See</i> COMPOSITE MATERIALS		
SAPP, J. F.		
Fracture (D).....	N	91
SARAVANAMUTTOO, H. I. H.		
Analog computer study of the transient performance of the Orenda 600-hp regenerative gas turbine (A).....	Ag	68
SARPKAYA, TURGUT		
Lift, drag, and added-mass coefficients for a circular cylinder immersed in a time-dependent flow (A).....	Je	77
Vortex formation and resistance in unsteady flow (A).....	Mr	80
SASS, FRIEDRICH (author)		
Geschichte des Deutschen Verbrennungs-Motorenbaues von 1860 to 1918 (BR).....	Mr	85
SATELLITES. <i>See</i> EARTH SATELLITES		
SAWS		
Pneumatic oscillating saw (A).....	N	74
SCALES, JOHN J.		
What do roller-chain ratings mean? (A).....	76	
SCHALLA, CLARENCE A.		
Design control of cantilever shaft critical speeds (A).....	Ag	71
SCHALCH, WALTER GILBERT		
Obituary.....	N	113
SCHAMP, HOMER W. JR.		
Use of melting points for measuring pressure in high-pressure, high-temperature vessels (A).....	F	78
SCHAU, F.		
Combustion control: key to better engine performance.....	My	55
SCHERAGA, DAVID I.		
Computers in manufacturing engineering (A).....	S	77
SCHETS, J. A.		
On the approximate solution of viscous-flow problems (A).....	O	70
SCHLATTER, HUGO		
Decisions that face ASME (C).....	Ap	86
SCHMIDT, JOSEPH J.		
High horsepower diesel-hydraulic locomotives in heavy duty freight service (A).....	JI	70
SCHMIDT, ROBERT		
Engineer or ingenieur (C).....	Je	81
SCHMIT, LUCIEN A. JR.		
Use of computers in minimum-weight structural design (A).....	N	78
SCHMITZ, R. P.		
Site requirements for large nuclear stations (A).....	My	80
SCHNEIDER, CARL ALBERT		
Obituary.....	Ja	122
SCHNEIDER, FRED B.		
Biography.....	D	93
Elected Fellow of ASME.....	D	93
SCHOFFER, P.		
Performance of photovoltaic cells at high radiation levels (A).....	JI	65
SCHOOF, ROBERT F.		
Careful with that hitch (AC).....	O	84
SCHREIER, STEFAN		
Comparison of five methods of calculating aerodynamic stagnation-point heat transfer at velocities of 25,000 to 40,000 fps (A).....	O	80
On the flow in the vaneless diffuser of a centrifugal compressor (A).....	Ja	74
SCHRENE, W. J.		
Continuous mixing of very viscous fluids in an annular channel (A).....	Je	73
SCHROCK, V. E.		
Expansion of a very low quality two-phase fluid through a convergent-divergent nozzle (A).....	JI	62
SCHULKE, ROBERT WYATT		
Obituary.....	F	110
SCHWARTZ, C. C.		
Estimating petrochemical plant costs from flow sheets (A).....	D	70
SCHWARTZ, C. M.		
Calcite-aragonite transition and the calibration of a belt-type apparatus between 15 and 35 kb 700 to 1400 C (A).....	F	78
Description and calibration of a modified girdle high-pressure, high-temperature apparatus (A).....	F	79
SCHWEIKHARD, WILLIAM G.		
Training of potential astronauts (A).....	N	76
SCHWEITZER, P. H.		
Geschichte des Deutschen Verbrennungs-Motorenbaues von 1860 to 1918 (BR).....	Mr	85
SCIAMMARELLA, C. A.		
Elastoplastic stress and strain distribution in a finite plate with a circular hole subjected to unidimensional load (A).....	Ap	81
SCIENCE		
Russian-English physics dictionary (BR).....	S	82
SCIENTISTS. <i>See</i> EMPLOYMENT		
SCIPIO, LYNN A.		
Obituary.....	N	113
SCLAR, C. B.		
Calcite-aragonite transition and the calibration of a belt-type apparatus between 15 and 35 kb, 700 to 1400 C (A).....	F	78
SCOTT, ROGER M.		
Biography.....	Ag	84
Elected Fellow of ASME.....	Ag	84
SCREEN		
On the prediction of gas flow rates through round wire screens (A).....	Je	68
SEALS		
Elastomeric joint sealants (A).....	Je	72
End face seals in light hydrocarbon liquids (A).....	D	69
Floating ring seals design and application—special reference to high pressure (A).....	Ag	70
High-temperature metal bellows seals for aircraft and missile accessories (A).....	JI	67
New development in flange seals (A).....	D	69
Protection of labyrinth seals from flexural vibration (A).....	JI	58
SEARS, EDWARD C.		
Engineering properties and design of ductile-iron pipe in underground pressure service (A).....	Je	74
SEAWATER		
Experimental seawater conversion (A).....	Ap	66
SEBAN, R. A.		
Heat transfer of the turbulent separated flow of air downstream of a step in the surface of a plane (A).....	N	83
SEIDEL, BARRY S.		
Asymmetric inlet flow in axial turbomachines (A).....	Je	75
SEISMOLOGY		
Observatory to detect nuclear blasts (A).....	Ap	71
SELIG, KUDRET		
Silicon cells for pyrheliometers and pyranometers (A).....	JI	64
SELLMAN, NILS TURE		
Obituary.....	Ja	122
SENCE, LEONARD H.		
Floating ring seals design and application—special reference to high pressure (A).....	Ag	70
SENS, W. H.		
Power for the supersonic transport (D).....	JI	75
SEPETOKI, W. K.		
Digital computer program for the general axially symmetric thin-shell problem (A).....	Ja	74
SERVO MECHANISMS		
Components and electropneumatic servos (A).....	O	69
Designing high-performance electromechanical servos (A).....	O	68
Digital servo controls projectors (A).....	Mr	64
SESSLER, JOHN G.		
Low cycle fatigue damage in pressure vessel materials (A).....	My	84
SETENA, P. R.		
Transients in certain autonomous multiple-degree-of-freedom nonlinear vibrating systems (A).....	Mr	80
SEVCIK, J. K.		
System vibration and static analysis (VAST program) (A).....	JI	61
SEVERSON, RAYMOND J.		
Bronze injection pump problems—metalurgy? design? usage? (A).....	D	68
Copper alloys in design.....	F	34
SEWAGE TREATMENT		
Pasterliser process for water purification (A).....	Je	48
Suds control and transfer (A).....	N	64
SEXTON, R. E.		
Space vehicle thermal and atmospheric control research program (A).....	Ag	62
SHAFTS		
Analysis of the motion of a flexible shaft inside a guide tube (A).....	O	78
Composite steel shaft design for use in corrosive media (A).....	D	56
Control of shaft vibration at hypercritical speeds (A).....	O	71
Design control of cantilever shaft critical speeds (A).....	Ag	71
SHANNON, ROBERT H.		
Central station BWR nuclear power plant (A).....	My	80
SHANPLES, T. D.		
Cost reduction: dollars per hour (D).....	Mr	82
SHAW, MILTON CLAYTON		
Biography.....	D	93
Elected Fellow of ASME.....	D	93
SHEA, PATRICK H.		
Forklifts and their applications (A).....	N	78
SHEAR. <i>See</i> METAL CUTTING		
SHEET METAL		
Sheet-metal perforating using a numerically controlled turret punch press (A).....	S	77
SHELLS		
Analysis of plastic shallow conical shells (A).....	My	91
Application of variational equation of motion to the nonlinear vibration analysis of homogeneous and layered plates and shells (A).....	My	91
Buckling of a thin-walled circular cylindrical shell heated along an axial strip (A).....	D	67
Buckling of a very thin cylindrical shell due to an impulsive pressure (A).....	N	88
Digital computer program for the general axially symmetric thin-shell problem (A).....	Ja	74
Dynamics of impulsively and randomly varying systems (A).....	My	91
Effect of internal pressure on the influence coefficients of spherical shells (A).....	Ap	80
Elastic cylindrical shell under nearly uniform radial impulse (A).....	N	87
Force singularities of shallow cylindrical shells (A).....	O	80
General procedure for analyzing thick shells of irregular shapes of mechanical and thermal loading (A).....	Mr	75
Limit analysis of shallow shells of revolution (A).....	My	90
Linear bending theory of laminated cylindrical shells under axisymmetric load (A).....	Ja	74
Longitudinal impact of a semi-infinite elastic cylindrical shell (A).....	N	84
On the form of variationally derived sheet equations (A).....	N	86
On the dynamics of plastic spherical shells (A).....	My	89
On the influence of uniform stress states on the natural frequencies of spherical shells (A).....	My	89
On the initial response of a spherical shell to a concentrated force (A).....	My	90
Plastic general-instability pressure of submarine pressure hulls (A).....	Je	67
Plastic instability of cylindrical shells with rigid end closures (A).....	C	79
Shells of revolution with edge loads of rapid circumferential variation (A).....	My	90
Solution for the thin elastic shell with surface loads (A).....	N	86
Stresses in short noncircular cylindrical shells under lateral pressure (A).....	Mr	80
Study of the vibrations of shallow spherical shells (A).....	N	84

(A) denotes Abstract; (AC) Author's Closure; (BR) Book Review; (C) Correspondence; (D) Discussion; (Ed) Editorial

SHICK, A. W. Design and development of the "H" gas engine (A).....	D	69	SIMULATORS. See also BEARINGS, GEARS, SPACE VEHICLES			SOLAR RADIATION		
SHIELDS, J. RODGER Supercharger design for a supercharged steam generator (A).....	Ap	76	SINCLAIR, G. M. Parameter representation of the yield behavior of iron (A).....	Jl	69	Calibration of a solar simulator (A).....	Jl	65
SHINOZUKA, M. Stresses in a linear incompressible viscoelastic cylinder with moving inner boundary (A).....	N	86	SIRKIN, M. F. Impact behavior of elastomers (A).....	Je	72	Carbon-arc solar simulator (A).....	Jl	65
SHIPPING CONTAINERS Domestic and international progress in the standardization of freight containers (A).....	D	72	SISSON, A. BAYARD Central Station uses of aluminum alloys for demineralized water storage and condenser tubes (A).....	My	82	Continuously operating carbon-arc lamp for solar simulation (A).....	Jl	64
SHIPS. See also CARGO HANDLING Gas-turbine application in U. S. Coast Guard vessels (A).....	Ag	69	SIZER, PHILIP S. Analytical study of subsurface locking mandrels (A).....	D	69	Design and technology of high-wattage xenon and mercury compact arc lamps for simulation of solar radiation (A).....	Jl	64
Maritime administration gas-turbine program (A).....	Ag	69	SKORECKI, J. Vibration and noise of diesel engines (A).....	S	72	Silicon cells for pyrheliometers and pyranometers (A).....	Jl	64
Marine nuclear propulsion (A).....	Je	62	SLABS. See HEAT TRANSFER			SOLAR SIMULATION. See CARBON-ARC LAMPS		
Nuclear-powered ore carrier (A).....	My	74	SLAUGHTER, F. (author) Design and the education of mechanical engineers (BR).....	O	85	SOLDAN, HENRY M. Biography.....	Ag	84
Nuclear ships can be economic (A).....	Ag	52	SLOSHING. See LIQUIDS			Elected Fellow of ASME.....	Ag	84
Proposed gas-turbine propulsion plant for Great Lakes ore carriers (A).....	Jl	59	SMETANA, FREDERICK O. On the prediction of gas flow rates through round wire screens (A).....	Je	68	SOLDATE, A. M. Bilinear theories in plasticity and an application to two-dimensional wave propagation (A).....	N	85
Testing and initial operation of the NS Savannah (A).....	My	81	SMILEY, L. G. General Foods palletized shipping program (A).....	O	72	SOLIDS INJECTION. See BLAST FURNACES		
SHIRING, CLYDE G. Aluminum in oil and gas drilling operations (A).....	D	68	SMITH, ALVIN H. Thermionics: auxiliary power application for space (A).....	N	77	SOMERS, JOHN CAMERON Obituary.....	N	113
SHOCK. See also HIGH-PRESSURE RESEARCH, METAL CUTTING Comparison of the blast wave excited shock spectra of a continuous nonlinear system and an equivalent bilinear system (A).....	Jl	67	SMITH, CHARLES E. Motions of a stretched string carrying a moving mass particle (A).....	N	88	SONICS. See PILE DRIVERS		
Response of a free-standing or anchored explosive-forming assembly (A).....	Jl	67	SMITH, CHARLES SAMUEL Obituary.....	F	110	SORENSEN, OLAV Motives of men at work (A).....	D	72
SHOCK ABSORBERS King-size doorstop for Pittsburgh Auditorium (A).....	O	56	SMITH, J. F. DOWNIE Machine Design Award.....	Ja	101	SORIA, GUIDO Obituary.....	Ag	97
SHOEMAKER, FRED RAPHAEL Obituary.....	Ag	97	SMITH, LEROY H., JR. Sweep and dihedral effects in axial-flow turbomachinery (A).....	Je	69	SOROS, PAUL Solids bulk handling systems in the chemical industry (A).....	D	72
SHOUMAN, A. R. Use of compressor-inlet prewhirl for the control of small gas turbines (A).....	Ag	69	SMITH, MARION L. The team: scientist, engineer, technician (A).....	Mr	26	SORTAIS, H. C. Mechanics of conventional spinning (A).....	Je	74
SHU, H. H. Relation between the rubbing interface temperature distribution and dynamic thermocouple temperature (A).....	D	66	SMITH, R. I. Hydrogen embrittlement at Linden Generating Station (A).....	D	64	SOUND SUPPRESSORS. See NOISE		
SHU, L. S. Finite deformations of a rigid perfectly plastic arch (A).....	Ap	81	SMITH, RONALD B. Keeping pace with the scientific age... R. B. Smith, the international engineer (Ed).....	O	26	SPACE PROBER Russian Mars I probe on the way (A).....	Mr	71
SHULL, H. E. Load-carrying capacities of simply supported rectangular plates (A).....	O	79	SMITH, RUSSELL JOHN Obituary.....	Ja	122	SPACE STATIONS. See SPACE VEHICLES		
SHUMAKER, CLIFFORD H. Dollars and sense.....	Ja	22	SMITH, WILLY Void fraction measurements in a cavitating venturi (A).....	Jl	63	SPACE SUITS Space-suit mobility tester (A).....	Je	56
SIDEBOTTOM, O. M. Theoretical and experimental creep analyses of beam-columns (A).....	Jl	69	SMITHBERG, E. Friction and forced convection heat-transfer characteristics in tubes with twisted tape swirl generators (A).....	Je	68	SPACE TRAVEL. See also ROCKETS Engineers' efforts decide future space uses (A).....	D	90
SIDLE, ROBERT GOODFELLOW Obituary.....	Ag	97	SMOOT, LEWIS EGERTON Obituary.....	My	123	First simulator (A).....	Je	61
SIGEL, BERTHELM Analysis of factors influencing plasma-engine performance (A).....	Jl	62	SNECK, H. J. Solution for the pressure distribution in a short gas journal bearing (A).....	O	73	Improved menu for spacemen (A).....	My	61
SIEGEL, R. Combined radiation and convection in an asymmetrically heated parallel plate flow channel (A).....	O	76	SNYDER, W. T. Influence of finite-wall conductance on load capacity of the magnetohydrodynamic slider bearing (A).....	D	65	Laboratory in space.....	N	56
Laminar heat transfer in a channel with unsteady flow and wall heating varying with position and time (A).....	Ja	75	SOCIETY FOR THE HISTORY OF TECHNOLOGY Annual Meeting.....	F	95	Langley Research Center simulation facilities for manned space missions (A).....	O	72
SIELAND, HENRY JOSEPH Obituary.....	D	97	Officers elected.....	F	94	Lunar capsule transmitter (A).....	N	69
SIN, G. C. On the crack extension in plates under plane loading and transverse shear (A).....	My	89	SOCIETY OF AUTOMOTIVE ENGINEERS Joint AIAA-ASME Aerospace Reliability and Maintainability Conference.....	Mr	102	Psychological and medical problems in space flight (A).....	Ag	65
Strength of stress singularities at crack tips for flexural and torsional problems (A).....	N	89	SOGIN, H. H. Summary of experiments on local heat transfer from the rear of bluff obstacles to a low speed airstream (A).....	N	83	Space age gets down to earth... at the Third National Conference on the peaceful uses of outer space.....	O	90
SILBER, ALFRED Steady-state flow of a gelling material between rotating concentric cylinders (A).....	N	86	SOHRLE, J. S. Foundations for high-speed machinery (A).....	Je	71	Space flight training programs (A).....	N	76
SILENCERS. See GAS TURBINES			SOKOLOWSKI, M. Analysis of L-shaped levers with varying fillet radius and pivot hole locations (A).....	Jl	66	"This side up" for astronauts (A).....	N	71
SILICONES Silicone deformers (A).....	My	67	SOLAR ENERGY Auxiliary power-generating system for a manned space laboratory (A).....	Ag	64	Training for orbital maintenance (A).....	N	76
SILCOX, LEWIS K. A call to citizenship.....	Ap	26	Optimization of focusing solar-collector design (A).....	Jl	65	Training of potential astronauts (A).....	N	76
SIMON, D. E., II Case history of hydrogen damage (A).....	D	63	Performance of photovoltaic cells at high radiation levels (A).....	Jl	65	SPACE VEHICLES Application of a SNAP reactor power plant to a manned orbiting space station (A).....	Ag	64
SIMPSON, W. J. New design opportunities with plastics (A).....	O	71	Selective radiation properties of particulate coatings (A).....	Jl	64	Astronaut's vacuum cleaner (A).....	Jl	48
SIMULATION. See AIRPLANES, COMPUTERS, GAS PIPELINES, GAS TRANSMISSION, MACHINE DESIGN, SOLAR RADIATION, SPACE TRAVEL, SPACE VEHICLES, TESTING MACHINES			Solar Energy Symposium program, 1963 (A).....	Mr	99	Auxiliary power-generating system for a manned space laboratory (A).....	Ag	64
			Solar stove (A).....	Jl	53	Cosmos simulator (A).....	Ag	70
			Solar thermionic generator (A).....	Ap	68	Design of a large door for the JPL space simulator (A).....	Mr	72
			Study of a solar air conditioner.....	Ag	31	Developments in the state of the art of regenerable solid absorbent CO ₂ removal systems (A).....	Ag	62
			Survey of techniques for predicting the space output of photovoltaic devices (A).....	Jl	64	Explorer X—evaluation of structural design (A).....	Mr	73
			Thermionics: auxiliary power application for space (A).....	N	77	Fuel tanks for spacecraft: the difficulties.....	Ap	44
						Gravity-gradient excitation of a rotating cable-counterweight space station in orbit (A).....	N	87
						Human response to thermal stress and space travel (A).....	Ag	63
						Integrated structural/insulation system for hypersonic flight vehicles (A).....	Mr	60
						Manned space vehicles (A).....	Mr	73
						Mapping Mars by spacecraft (A).....	N	66
						Meteoroid impact on shielded space vehicles (A).....	Ag	64
						Multipurpose research laboratory for flight simulation (A).....	Ag	65
						On the carbon-dioxide problem for manned post-Apollo space vehicles (A).....	Ag	66
						Piston engines are reborn for space power (A).....	Mr	73
						Power for moon vehicles (A).....	Ja	56
						Present status of the Sabatier life support system (A).....	Jl	60
						Rugged, reliable space sensors (A).....	S	64
						Space nuclear reactor safety (A).....	N	66
						Space research program.....	Ja	30
						Space vehicle thermal and atmospheric control research program (A).....	Ag	62
						Special space tools (A).....	Mr	63
						State of the art in bipropellant reaction-control systems (A).....	Jl	60
						Status and trends—space propulsion.....	Mr	48
						Structural design for space vehicles (A).....	Mr	74
						Thermal analysis of the Echo 11 canister assembly (A).....	Jl	61

SPACE VEHICLES (continued)		
Utilization of electric thrust devices for spacecraft propulsion (A).....	Je	61
Water in space from human waste (A).....	Je	60
Wave-induced motions of a large rocket vehicle drifting in a vertical attitude (A).....	Je	67
The X-15—the first manned space structure (A).....	Mr	74
SPARKS, L. L.		
Effects of liquid-solid interfaces on the nucleation characteristics of cryogenic liquids (A).....	Ag	72
SPARNELL, CHARLES F.		
Packaging the passenger—design for collision project survival car II (A).....	Ap	78
SPARROW, E. M.		
Effect of diffusion thermo and thermal diffusion for helium injection into plane and axisymmetric stagnation flow of air (A).....	N	80
Effect of surface roughness on the total hemispherical and specular reflectance of metallic surfaces (A).....	O	76
Heat transfer and forces for free-molecule flow on a concave cylindrical surface (A).....	Je	68
Heat transfer and skin friction for turbulent boundary-layer flow longitudinal to a circular cylinder (A).....	Ja	73
Thermal radiation absorption in rectangular groove cavities (A).....	Je	76
SPARROW, J. K.		
Interim report on dust louvre inertial separator application on 8500-hp U.P.P.R. gas-turbine locomotive (A).....	Ag	67
SPENCER, R. C.		
Method for predicting the performance of steam turbine generators—(16,500 kw and larger) (A).....	Je	64
SPHERES		
Dynamic response of a solid, viscoelastic sphere to translational and rotational excitation (A).....	N	89
SPICKER, T. S.		
Influence of particle size and volatile content on the ignitibility of pulverized bituminous coal (A).....	F	83
SPINDLES. See TEXTILE MACHINERY		
SPINNING. See METAL SPINNING		
SPONTANEOUS COMBUSTION. See SAFETY ENGINEERING		
SPORN, PHILIP		
Biography.....	Ja	124
Recipient ASME Medal.....	Ja	100
Recipient of Washington Award.....	Ap	96
SPRINGS. See also WAVE MECHANICS		
Stress analysis of a helical coil (A).....	Ap	80
SQUEEZE FILMS. See LUBRICATION		
SRINATH, L. S.		
Analysis of L-shaped levers with varying fillet radius and pivot hole locations (A).....	Jl	66
STAFFORD, PAUL M.		
Classification and quantification of managerial work (A).....	Ap	79
STABLE, NORBERT		
New methods of making and handling drawings (A).....	O	70
STAIGER, WILLIAM M.		
Obituary.....	F	110
STAINLESS STEELS. See STEEL ALLOYS		
STALL, J. C.		
Superimposing multiple channel data on a high-speed cine record (A).....	D	70
STANDARDS. See ASME CODES AND STANDARDS WORKSHOP		
STARICHENKA, JOSEPH A.		
For filters: metallized fibers.....	F	54
STARKEY, W. L.		
Effects of high-stress-amplitude fatigue damage on the endurance properties of high-performance stainless-steel and titanium alloys (A).....	My	86
STARKMAN, E. S.		
Expansion of a very low quality two-phase fluid through a convergent-divergent nozzle (A).....	Jl	62
STARNER, K. E.		
Experimental investigation of free-convection heat transfer from rectangular fin arrays (A).....	Ja	75
STATISTICAL METHODS		
Traveling salesman riddle (A).....	O	52
STEAM		
Essay on the nature of steam—1 (A).....	Je	66
Viscosity of superheated steam up to 275 deg C. A refined determination (A).....	Mr	77
The world of Carnot.....	D	40
STEAM CONDENSERS		
Calculation of the performance of surface condensers by digital computer (A).....	D	67
STEAM TURBINES. See also POWER PLANTS		
—STEAM		
Examples of modified turbine testing (A).....	Je	66
High performance-low pressure turbine element (A).....	D	68
Prevention of cyclic thermal-stress cracking in steam turbine rotors (A).....	D	68
Procedure for calculating the packet frequencies of steam turbine exhaust blades (A).....	Je	65
Steam turbines controlled starting (A).....	Ja	70
STEEL		
Using argon to degas steel (A).....	D	47
STEEL ALLOYS. See also HEAT-TREATMENT		
Effect of high-stress-amplitude fatigue damage on the endurance properties of high-performance stainless-steel and titanium alloys (A).....	My	86
New performance data on precipitation-hardening stainless steels (A).....	D	69
STEELE, C. R.		
Solution for the thin elastic shell with surface loads (A).....	N	86
STEELE, C. R.		
Shells of revolution with edge loads of rapid circumferential variation (A).....	My	90
STEIN, IRVING		
Stress analysis of a helical coil (A).....	Ap	80
STEINBERG, MAX JACOB		
Obituary.....	Jl	98
STENNING, A. H.		
Instabilities in the flow of a boiling liquid (A).....	Je	70
STEPANOFF, A. J.		
Cavitation properties of liquids (A).....	Ag	70
STEPHENS, J. O.		
100, 200, and 400-mw steam and gas turbine power plants (A).....	D	67
STEEN, ARTHUR C.		
Air pollution—what's being done?.....	Jl	26
STERNLICHT, B.		
Analysis of plain cylindrical journal bearings in turbulent regime (A).....	D	66
Comparison between theories and experiments for the threshold-of-instability of rigid rotor in self-acting, plain-cylindrical journal bearings (A).....	O	73
Geometry effects on the threshold of half-frequency whirl in self-acting, gas-lubricated journal bearings (A).....	O	74
Stability and dynamics of rotors supported on fluid-film bearings (A).....	Je	76
STEVENS, GEORGE WILLIAM		
Obituary.....	Mr	111
STEWART, JAMES R.		
Design safety (C).....	My	117
The job-shop market and the engineer.....	F 103, (D) Ap	87
STICKLER, DAVID C.		
Nonlinear heat transfer for the plane slab (A).....	O	77
STOKERS		
Coking stoker design and application (A).....	F	85
STONE, MASON ALBERT		
Obituary.....	D	96
STONEMAN, DENNIS		
Simplified flow-ratio computing and control (A).....	D	70
STORAGE. See TANKS, WAREHOUSES		
STOTT, T. E.		
Proposed gas-turbine propulsion plant for Great Lakes ore carriers (A).....	Jl	59
STRATIFIED CHARGE. See ENGINEERING—INTERNAL-COMBUSTION		
STRAUSS, HERBERT S.		
Design and technology of high-wattage xenon and mercury compact arc lamps for simulation of solar radiation (A).....	Jl	64
STRESSES AND STRAINS. See also HIGH-PRESSURE RESEARCH, METAL CUTTING, SHELLS, VISCOELASTICITY		
Bending stress in a cracked plate on an elastic foundation (A).....	O	78
Effect of dynamic strain amplitude on the dynamic mechanical properties of elastomers (A).....	Je	72
Elastoplastic stress and strain distribution in a finite plate with a circular hole subjected to unidimensional load (A).....	Ap	81
Extension of iteration method for determining strain distributions to the uniformly stressed plate with a hole (A).....	Ap	80
Longitudinal stress pulse propagation in wide rectangular bars		
Part 1—Theoretical considerations (A).....	Ap	80
Part 2—Experimental observations and comparisons with theory (A).....	Ap	80
Plane-stress problem for a doubly connected region in which the medium undergoes elastic and creep deformation (A).....	N	88
Strength of stress singularities at crack tips for flexural and torsional problems (A).....	N	89
STRESSES AND STRAINS (Continued)		
Stress distribution in a nonhomogeneous elastic plane with cracks (A).....	Mr	80
Stress-strain distribution during transient heating of a transversely anisotropic material (A).....	My	89
Stresses due to a band of normal stress at the entrance of a circular hole (A).....	Ap	80
Stresses in a hydraulic turbine stay ring (A).....	Je	71
Stresses in a linearly incompressible viscoelastic cylinder with moving inner boundary (A).....	N	86
STRINGS		
Motions of a stretched string carrying a moving mass particle (A).....	N	88
STRIPPING SHOVELS. See MINING		
STROUD, EDWIN GERRISH		
Obituary.....	N	113
STROWGER, EARL B.		
Biography.....	D	93
Elected Fellow of ASME.....	D	93
STRUB, R. A.		
Pressure fluctuations and fatigue stresses in storage pumps and pump turbines (A).....	Jl	63
STRUBLE, R. A.		
Resonant oscillations of a beam-pendulum system (A).....	O	79
STRUCTURES. See also FOUNDATIONS, PIPE AND PIPING		
Combined effects of stress and irradiation on structural materials (definition and approach) (A).....	S	78
Finite deformations of a rigid perfectly plastic arch (A).....	Ap	81
General analytical approach for complex redundant structures (A).....	Ag	62
Honeycomb core cut (A).....	My	62
Instant room with portable hut (A).....	My	67
On the resonant frequencies and mode shapes for a cantilevered "L" frame (A).....	Jl	60
STURMON, GEORGE R.		
Flame quenching (A).....	F	84
SURMARINER. See SHELLS		
SUCKER-ROD JOINTS. See PETROLEUM—WELL EQUIPMENT		
SULLIVAN, N. M.		
Automatic warehousing.....	Ap	53
SUPERCARGERS. See BOILERS		
SUPERSONIC FLIGHT. See AIR TRANSPORT		
SUPERSONICS. See TURBINES		
SURFACE FINISH		
Effect of surface roughness on the total hemispherical and specular reflectance of metallic surfaces (A).....	O	76
Measuring surface finish.....	D	42
SURGES. See VALVES		
SUSPENSIONS. See ROTORS, WAVE MECHANICS		
SUTABUTRA, H.		
Some applications of the maximum principle to second-order systems, subject to input saturation, minimizing error, and effort (A).....	Jl	68
SUZUKI, B. H.		
Stress-strain distribution during transient heating of a transversely anisotropic material (A).....	My	89
SWENSON, H. S.		
Influence of axial heat-flux distribution of the departure from nucleate boiling in a water-cooled tube (A).....	My	78
SWITCH-CART SYSTEMS. See MATERIALS HANDLING		
SWINGLER, W. F.		
Building automation (A).....	S	75
SYSTEMS ENGINEERING		
Principles underlying systems engineering (BR).....	Ag	77

(A) denotes Abstract; (AC) Author's Closure; (BR) Book Review; (C) Correspondence; (D) Discussion; (Ed) Editorial

- TANKS (continued)**
- Plastic coating rejuvenates storage tanksS 38
- Tapered plate for storage tanks (A).....F 68
- Use of plastic coatings for upgrading steel tanks (A).....Ja 72
- TANNER, JULIUS ROY**
- Obituary.....F 110
- TAO, L. N.**
- On unsteady heat transfer of combined free and forced convection in circular tubes (A).....O 78
- TASI, J.**
- Thermoelectric dissipation in vibrating plates (A).....N 85
- TAYLOR, C. FAYETTE**
- The big reciprocating engine—how to assure its future.....F 46
- TAYLOR, G. RUSSELL**
- Radiotracer test facility for hideout measurements under boiler conditions (A).....Jl 72
- Techniques of atomic reactor plant decontamination (A).....Jl 71
- TAYLOR, HAMILTON DANA**
- Biography.....Ja 91
- Elected Fellow of ASME.....Ja 91
- TEDLAR.** See CONSTRUCTION MATERIALS
- TELEVISION**
- An exciting challenge: the practice of mechanical engineering (as presented on television).....S 93
- TENENBAUM, D. M.**
- Testing the big rocket engines.....F 28
- TENNEY, EDWARD HENRY**
- Obituary.....Ap 113
- TESTING.** See MACHINE DESIGN, PRESSURE VESSELS
- TESTING MACHINES**
- Road shock simulators (A).....S 70
- TRUMER, K. A.**
- Speed control of precise power generating sets (A).....Je 66
- TZWIF, O. E.**
- Measurements of heat transfer from a cylinder with air injection into a turbulent boundary layer (A).....N 80
- TEXTILE INDUSTRY**
- Air conditioning for textile mills (A).....Ag 66
- One hundred years of textile-mill engineering (A).....O 73
- Waste heat recovery for textile finishing plants (A).....Ag 66
- Wet-finishing instruments and their application (A).....Ag 66
- TEXTILE MACHINERY**
- Developments in textile machinery in Germany (A).....O 67
- Vibration behavior of the textile spindle (A).....Ag 66
- TEXTILES**
- Cotton can produce elastic knitted fabrics (A).....Ag 66
- TRACKREY, JAMES D.**
- Government money? (C).....O 82
- TRAL-LARSEN, H.**
- Fluid-temperature transients in a dual heat-exchanger system (A).....Je 78
- THERMAL ANALYSIS.** See SPACE VEHICLES
- THERMAL DIFFUSION.** See BOUNDARY LAYER
- THERMAL ENVIRONMENT.** See PHYSIOLOGY, SPACE VEHICLES
- THERMAL STRESSES**
- Asymmetrical thermal stress distribution in reactor fuel tubes (A).....My 78
- Clamped plate analogy for thermoelasticity (A).....My 89
- Photothermoelastic investigation of thermal-stresses in flat plates (A).....My 89
- Prevention of cyclic thermal-stress cracking in steam turbine rotors (A).....D 68
- Thermal stresses in concentrically heated hollow cylinders (A).....Mr 75
- THERMIONICS.** See SOLAR ENERGY
- THERMISTORS**
- Positive coefficient thermistors (A).....S 67
- THERMOCOUPLES.** See INSTRUMENTS—TEMPERATURE
- THERMODYNAMICS**
- Analysis of the Otto cycle taking into consideration the effect of varying operating parameters (A).....Je 66
- Estimation of steady-state steam void fraction by means of the principle of minimum entropy production (A).....O 78
- Idealized limited-pressure, compression-ignition cycle: an empirical treatment of its response to varying operating parameters (A).....S 72
- THERMODYNAMICS (continued)**
- Nernst generator, a solid-state, thermomagnetic direct-energy converter (A).....Ja 75
- Richard Mollier—100th anniversary.....D 40
- The world of Carnot.....D 40
- THERMOELASTICITY**
- Thermoelectric dissipation in vibrating plates (A).....N 85
- Transient coupled thermoelastic boundary value problems in the half-space (A).....Je 76
- THERMOELECTRICITY**
- Alternating current thermoelectric generator (A).....Je 64
- Austin cell—new power source (A).....Ja 53
- Double diode thermionic converter (A).....O 63
- On the boundedness of the dimensionless index of performance of a Nernst effect generator (A).....O 78
- On the choice of coordinates used to describe thermoelectric and thermomagnetic generators (A).....O 79
- THERMOMAGNETISM.** See also THERMOELECTRICITY
- Nernst generator, a solid-state, thermomagnetic direct-energy converter (A).....Ja 75
- THERMOMETERS.** See INSTRUMENTS—TEMPERATURE
- THIRUVENGADAM, A.**
- Unified theory of cavitation damage (A).....Je 70
- THOMAN, R. J.**
- Effect of the 150-degree partial bearing on rotor-unbalance vibration (A).....O 73
- THOMAS, ROBERT S.**
- Humboldt response to thermal stress and space travel (A).....Ag 63
- THOMPSON, STANLEY**
- Study of reactor kinetics (A).....My 81
- THOMSEN, E. G.**
- Mechanics of conventional spinning (A).....Je 74
- Some observations on the mechanics of orthogonal cutting of Delrin and Zytel plastics (A).....O 76
- THOMSON, WILLIAM T.**
- Dynamical compliance of rectangular foundations on an elastic half-space (A).....N 87
- THORNTON, C. G.**
- Applications of advanced electronic components in product design (A).....O 70
- THORPE, J. F.**
- Hydraulic flow in coupled parallel channels of varying cross-sectional area (A).....Je 70
- THOUTRET, WOLFGANG E.**
- Design and technology of high-wattage xenon and mercury compact arc lamps for simulation of solar radiation (A).....Jl 64
- TIERCKMORTON, EDMUND HUGH**
- Obituary.....Je 107
- THIRING, JOHN WHITLOW**
- Obituary.....D 97
- TICHVINSKY, L. M.**
- A brief history of friction. Part one.....S 55
- A brief history of friction. Part two.....O 53
- TIERNEY, ERNEST T.**
- Managing creative scientists and engineers (BR).....S 81
- TIME AND MOTION STUDY**
- Programmed time study (A).....My 65
- TIMPSON, WILLARD QUACKENBOS**
- Obituary.....Ja 122
- TING, THOMAS C. T.**
- Plastic deformation of a cantilever beam with strain-rate sensitivity under impulsive loading (A).....N 88
- TIPPETS, F. E.**
- Analysis of the critical heat-flux condition in high-pressure boiling water flows (A).....Je 67
- Critical heat fluxes and flow patterns in high pressure boiling water flows (A).....Mr 78
- TISCHLER, A. O.**
- Status and trends—space propulsion.....Mr 48
- TITANIUM**
- Effect of high-stress-amplitude fatigue damage on the endurance properties of high-performance stainless-steel and titanium alloys (A).....My 86
- TORREY, J. E.**
- Coal industry: a protest (C).....D 75
- TOBIN, J. C.**
- Combined effects of stress and irradiation on structural materials. (definition and approach) (A).....S 78
- TOLINS, I. S.**
- Transient coupled thermoelastic boundary value problems in the half-space (A).....Je 76
- TONELLI, A. DUARDO**
- Auxiliary power-generating system for a manned space laboratory (A).....Ag 64
- TOOL GEOMETRY.** See MACHINE TOOLS
- TOPOGRAPHY.** See METAL CUTTING
- TORREY, WILLIAM G.**
- The obsolescent engineer.....O 28
- TOWER, S. N.**
- Role of a superheat power experiment in the development of supercritical steam nuclear-fired power plants (A).....My 79
- TOYS.** See EDUCATION
- TRAINING.** See SPACE TRAVEL
- TRANSMISSIONS.** See DRIVES
- TRANSPORTATION.** See also RAIL CARS, SHIPPING CONTAINERS
- Automated subway (A).....Je 61
- The crushed commuter (Ed).....N 27
- Designing the moving-walk belt.....My 44
- Magnetic road: a new form of transport (A).....S 78
- New hope for the crushed commuter.....N 29
- TRAUDT, WILLIAM FREDERICK**
- Obituary.....S 104
- TRAVIS, L. P.**
- Performance of solid rocket motors with gas-particle flow (A).....Ag 65
- TRIEBER, K. L.**
- Pump-unit controller and safety device (A).....My 83
- TRENT, D. J.**
- Meteoroid impact on shielded space vehicles (A).....Ag 64
- TRICKETT, JOSEPH M.**
- Engineered use of time (A).....D 72
- TRIGGERS, K. J.**
- Chip formation in high-speed cutting of copper and aluminum (A).....Ap 82
- Theoretical aspects of high speed shear in face centered cubic metals (A).....Ap 83
- TRIMBLE, MONROE STUART**
- Obituary.....Jl 98
- TROUT, R. G.**
- Axially symmetric flow between prescribed surfaces and pump inlet design (A).....Ag 70
- TROWBRIDGE, ROY P.**
- Biography.....Ag 91
- Nominated for Director.....Ag 91
- TRUMPLER, P. R.**
- Stability of the high-speed journal bearing under steady load (A).....Jl 67
- TRUSCHI, RAYMOND B.**
- An experimental investigation of an improved vortex cooling device (A).....Ja 76
- Prediction of space radiator performance (A).....Ag 65
- TUBES.** See also BOILER TUBES, CONDENSERS, HEAT-EXCHANGE EQUIPMENT, METAL SPINNING
- Crushing of a tube between rigid plates (A).....O 78
- Homing long tubes (A).....O 62
- Inspecting the interiors of small-diameter tubes (A).....S 61
- Interaction of pressure, end load, and twisting moment for a rigid-plastic circular tube (A).....N 86
- TUBES AND TUBING**
- Seamless steel tubing (A).....D 54
- TOCHNER, H. J.**
- Comparison of the blast wave excited shock spectra of a continuous nonlinear system and an equivalent bilinear system (A).....Jl 67
- TUCKER, ROBERT S.**
- Management of defense R & D (A).....D 72
- TUNNELS**
- Monument acts as ventilator for vehicular tunnels (A).....Ja 66
- TURBINES**
- Low aspect ratio turbines (A).....Je 75
- Supersonic turbines (A).....Je 75
- TURBOFANS.** See AIRPLANE ENGINES
- TURBOJETTS.** See AIRPLANE ENGINES
- TURBOMACHINERY**
- Asymmetric inlet flow in axial turbomachines (A).....Je 75
- Secondary-flow phenomena in stator and rotor-blade rows and their effect on turbine performance (A).....Ag 68
- Sweep and dihedral effects in axial-flow turbomachinery (A).....Je 69
- Theoretical design of a high-head axial-flow reversible pump-turbine (A).....Je 70
- TURBOPUMPS.** See ROCKETS
- TURBULENCE PROMOTERS.** See FLUID FRICTION
- TURNER, CHARLES PHILIP**
- Obituary.....My 123
- TUTHILL, ELMER SPRAGUE**
- Obituary.....O 108
- TUTT, CHARLES L., JR.**
- Biography.....Ag 92
- Nominated for Vice-President.....Ag 92

- TIDINGS, J. E.
Study of stress homogeneity in cylindrical cavities at high pressures (A).....F 77
- U**
- UDALL, STEWART L.
Power engineering in the USSR.....Ag 26
- UGUCCINI, ORLANDO W.
Carbon-arc solar simulator (A).....Jl 65
- UCKER, JOHN JOSEPH
Biography.....F 102
Design and the education of mechanical engineers (BR).....O 85
Elected Fellow of ASME.....F 102
- ULREY, L. S.
Design and development of the "H" gas engine (A).....D 69
- ULRY, D. N.
Axial-load design for high-performance radar-antenna structures (A).....Mr 74
- ULTRASONICS. See HIGH-PRESSURE RESEARCH, NONDESTRUCTIVE TESTING
- UNDERWATER RESEARCH
Robot serves underwater (A).....F 58
Underwater navigation (A).....N 69
- UNGAR, ERIC E.
Wave effects in viscoelastic leaf and compression spring mounts (A).....My 87
- UNIONS
Unions show ups and downs (A).....Ja 60
- UNITED ENGINEERING TRUSTEES
UEC receives Ford Foundation grant...S 86
- UOUL, E.
Theory of plasticity applied to machining with cut-away tools (A).....O 75
- V**
- VAIL, DAVID PORTER
Obituary.....N 113
- VALUE ENGINEERING
Mathematical models for value engineering (A).....S 76
Value engineer during the preparation of proposals (A).....Je 74
Value engineering application in military practice (A).....S 77
Value engineering—functional attack on costs.....N 35
- VALVES. See also HYDRAULIC CONTROL
Approach to the theory of hydraulic pressure-regulating relief valves (A).....Ag 72
Butterfly valves for hydro station (A).....N 74
Investigations concerning wear of inlet-valve seats in diesel engines (A).....S 72
Isolating valves by freezing (A).....Ag 59
Minimization of surge pressure from check valves for nuclear loops (A).....My 78
Poppet valve stability (A).....Je 71
Prediction of surge pressure from check valves for nuclear loops (A).....My 78
- VANADIUM
Recovery of vanadium from petroleum ash (A).....F 83
- VAN BRUNT, JOHN
Obituary.....S 104
- VANCE, LEDCREECH STUART
Obituary.....F 111
- VAN DER SLUYS, WILLIAM
Performance tests of long travel cushion underframes (A).....O 72
- VAN DER WERF, P.
Idealized limited-pressure, compression-ignition cycle: an empirical treatment of its response to varying operating parameters (A).....S 72
- VAN HENGEL, GERRIT HENDRICK
Obituary.....Je 107
- VAN HORNE, E. J., JR.
Practical mechanized scheduling for any maintenance department (A).....S 75
- VAN SCHWARTZ, ZOLLY C.
Some pertinent causes for cavitation pumping machinery (A).....Ag 72
- VAN VALKENBURG, A.
High-pressure microscopy (A).....F 77
- VAN VECHTEN, C. C.
Value engineering—functional attack on costs.....N 35
- VAPOR PRESSURE. See WATER
- VAPORS. See METALS, SAFETY ENGINEERING
- VARIABLE SPEED TRANSMISSIONS. See DRIVES
- VASSELLI, ANTHONY J.
Obituary.....O 108
- VAUGHN, ROBERT L.
Shock waves and vibration in high-speed milling (A).....Ap 84
- VEHICLES. See DYNAMICS, MOTOR VEHICLES, SPACE VEHICLES
- VERBLAGE, HAROLD E.
Obituary.....D 97
- VELKOFF, HENRY R.
Effect of electrostatic fields on free-convection heat transfer from flat plates (A).....O 77
- VENTILATION. See AIR POLLUTION, TUNNELS
- VENTURI TUBES. See FLOW OF FLUIDS
- VERNHOOF, B.
Study of full-branch weldments (A).....D 71
- VIBRATION. See also MACHINE TOOLS, METAL CUTTING, PILE DRIVERS, SHELLS, TEXTILE MACHINERY
Control of shaft vibrations at hypercritical speeds (A).....O 71
Dynamic characteristics and design criteria for a class of vibration-producing machines (A).....My 86
Effect of the 150-degree partial bearing on rotor-unbalance vibration (A).....O 73
Evaluation of the fixed point method of vibration analysis for a particular system with initial damping (A).....My 86
Free vibration of a simply supported bar with a linearly variable height of cross section (A).....Ja 73
Generalized minimum principle and its application to the vibration of a wedge with rotatory inertia and shear (A).....O 78
Hydrostatic gas journal bearing with journal rotation and vibration (A).....O 74
Malfunction detector for machinery (A).....My 63
Measurements of auto-oscillation in a hydroelectric supply tunnel and penstock system (A).....Je 70
Nonlinear normal mode vibrations of nonlinear systems having two degrees of freedom (A).....D 66
On the resonant frequencies and mode shapes for a cantilevered "L" frame (A).....Jl 60
Optimization of damping of four configurations of a vibrating uniform beam (A).....My 86
Precise amplitude measurement (A).....F 65
Resonant oscillations of a beam-pendulum system (A).....O 79
Review on vortex streets, periodic wakes, and induced vibration phenomena (A).....Je 68
Study of the vibrations of shallow spherical shells (A).....N 84
Synthesis of mechanical vibration filters with nonlinear characteristics (A).....My 87
System vibration and static analysis (VAST program) (A).....Jl 61
Transients in certain autonomous multiple-degree-of-freedom nonlinear vibrating systems (A).....Mr 80
Transmission matrices for vibration and their relation to admittance and impedance (A).....Jl 60
Vibration of an infinitely extending plate resting on an elastic foundation (A).....N 88
Vibration response of linear damped complex systems (A).....Je 76
Vibrations of a rectangular plate with concentrated mass, spring, and dashpot (A).....My 90
- VICKREY, CHARLES SPENCER
Obituary.....Je 107
- VILU, ANDRUS
Experimental determination of the minimum Reynolds number for instability in a free jet (A).....Ja 73
- VIORI, CHRISTIAN WILLIAM, JR.
Obituary.....Ag 113
- VISCOELASTICITY. See also STRESSES AND STRAINS, WAVE MECHANICS
Solution of viscoelastic stress analysis problems using measured creep or relaxation functions (A).....Ag 81
- VISCOSITY. See AERODYNAMICS, FLOW OF FLUIDS, STEAM
- VISKANTA, R.
Interaction of heat transfer by conduction, convection, and radiation in a radiating fluid (A).....Mr 76
- VLIET, G. C.
Critical heat flux for nearly saturated water flowing normal to a cylinder (A).....Mr 78
- VLUGTER, J. C.
Viscosity-temperature-pressure relationship of lubricating oils and its correlation with chemical constitution (A).....Jl 68
- VOADEN, G. H.
Runaway speed limiter tests at Rocky Reach (A).....Je 70
- VODAR, B.
Calibration of a controlled-clearance pressure balance up to 8000 bars (A).....F 82
- VON KARMAN, THEODORE
Obituary.....Je 105
Recipient of the National Medal of Science.....F 93
- VON ROTZ, ROBERT
Obituary.....Jl 98
- VON TURKOVICH, B. F.
Chip formation in high-speed cutting of copper and aluminum (A).....Ap 82
Theoretical aspects of high-speed shear in face centered cubic metals (A).....Ap 83
- VOORHEES, JOHN E.
Control of shaft vibrations at hypercritical speeds (A).....O 71
- VORTEX TUBES
An experimental investigation of an improved vortex cooling device (A).....Ja 76
- VORTEXES. See also FLOW OF FLUIDS
Lift, drag, and added-mass coefficients for a circular cylinder immersed in a time-dependent flow (A).....Je 77
Review on vortex streets, periodic wakes, and induced vibration phenomena (A).....Je 69
Study of induced vorticity in centrifugal compressors (A).....Je 71
- VROOM, W. L.
Variable-speed frictionometer for plastics, rubbers, metals, and other materials (A).....Je 72
- VUIA, R. E.
Performance testing of large steam generators (A).....F 85
- W**
- WAGONER, PHILIP DAKIN
Obituary.....Ap 113
- WAINA, WILLIAM FRANK
Obituary.....O 108
- WAKES. See VORTEXES
- WALDRON, CHRISTOPHER
Obituary.....Ap 113
- WALKER, JOHN W.
Filters for reactor containment.....S 41
- WALTON, EDWARD H.
Biography.....Ag 92
Nominated for Vice-President.....Ag 92
- WANDERER, EDWARD T.
Aluminum in oil and gas drilling operations (A).....D 68
- WANG, P. KENG CHIEH
Asymptotic stability of a time-delayed diffusion system (A).....N 85
Cavitation in valve-controlled hydraulic actuators (A).....N 87
- WARE, DAVID HERNDON
Obituary.....S 104
- WAREHOUSES
Automatic warehousing.....Ap 53
High-volume warehouse (A).....Ap 66
Warehouse automation.....Ap 51
- WARNAKA, G. E.
Effect of dynamic strain amplitude on the dynamic mechanical properties of elastomers (A).....Je 72
- WARNER, C. F.
Effects of selected gas stream parameters and coolant properties on liquid film cooling (A).....N 81
- WARNER, JOHN
Correlation of Reynolds-number effect for a family of small centrifugal compressors (A).....Ag 65
- WARNER, P. C.
Effect of the 150-degree partial bearing on rotor-unbalance vibration (A).....O 73
- WASTE DISPOSAL. See RADIOACTIVITY
- WASTE HEAT. See DIESEL ENGINE, GAS TURBINES, TEXTILE INDUSTRY
- WATER
Critical heat flux for nearly saturated water flowing normal to a cylinder (A).....Mr 78
Critical heat flux for subcooled water flowing normal to a cylinder (A).....Mr 78
Critical heat fluxes and flow patterns in high pressure boiling water flows (A).....Mr 78
Free convective heat transfer to supercritical water experimental measurements (A).....Mr 79
Note on vapor-pressure equations for water (A).....N 79
Rational equation of state for water and water vapor in the critical region (A).....N 84
Vapor pressure tables for water (A).....N 82
- WATER SUPPLY. See also SPACE VEHICLES
An answer to water shortages (A).....Ap 64
Diffusion still (A).....Je 50
Pasteurizer process for water purification (A).....Je 48
Water resources: Washington viewpoint.....My 27
- (A) denotes Abstract; (AC) Author's Closure;
(BR) Book Review; (C) Correspondence;
(D) Discussion; (Ed) Editorial

WATER TANKS Central station uses of aluminum alloys for demineralized water storage and condenser tubes (A).....My	82	WESTOVER, R. F. For plastics: the ram extruder.....Je	36	WITTING, H. Condensation of metal vapors during rapid expansion (A).....Je	67
WATER VAPOR. See WATER		Variable-speed frictionometer for plastics, rubbers, metals, and other materials (A).....Je	72	WITTEY, JULIUS E. Stratified-charge engines (A).....O	69
WATERMAN, H. I. Viscosity-temperature-pressure relationship of lubricating oils and its correlation with chemical constitution (A).....Jl	68	WETTER, PIERCE TROWBRIDGE Obituary.....Ag	97	WOJCIK, CHARLES K. Analytical representation of the root-locus (A).....Je	78
WAUCHOPE, GEORGE ANDRES Obituary.....S	104	WHEATON, THOMAS R. Using jet engines to generate electricity.....Mr	40	WOLAK, J. Use of chip tension to obtain a stress-strain curve from metal cutting tests (A).....Ap	82
WAGAMAN, ARTHUR RANKIN Obituary.....My	123	WHEELER, DEAN FREDERIC Obituary.....Ja	122	WOLFE, D. L. Space flight training programs (A).....N	76
WAVE MECHANICS. See also STRESSES AND STRAINS Bilinear theories in plasticity and an application to two-dimensional wave propagation (A).....N	85	WHELAN, RODERICK J. Obituary.....S	104	WOLFE, OSCAR Obituary.....Je	107
Dispersion of axially symmetric waves in elastic rods (A).....Je	77	WHIPPEN, W. G. Kaplan-type pumps for the City of Detroit (A).....My	82	WOLFF, FRANK Prestressed fiber-metal cylindrical pressure vessels (A).....Ag	63
Extensional waves along the edge of an elastic plate (A).....My	90	WHIPPLE, WILLIAM Obituary.....Jl	98	WOMEN IN ENGINEERING U. S. needs women engineers (A).....Ag	79
Uniaxial wave propagation in realistic viscoelastic materials (A).....N	86	WHIRL. See BEARINGS		Young women in engineering (A).....Mr	56
Wave effects in viscoelastic leaf and compression spring mounts (A).....My	87	WHISTLER, A. M. NPSH suppression in centrifugal pumps (A).....Ag	70	WONG, P. T. Y. Dominant unstable wavelength and minimum heat flux during film boiling on a horizontal cylinder (A).....O	76
WAVE MOTION Wave-induced motions of a large rocket vehicle drifting in a vertical attitude (A).....Je	67	WHITE, F. M., JR. Problem of pneumatic pressure lag. Part 1, steady-state flow in a tubing system (A).....Jl	63	WOOD, A. W. World's highest capacity roadable steam generator (A).....F	84
WEAR. See also GAS TURBINES Effect of surface energy on the wear process (A).....O	73	Part 2, unsteady flow in a tubing system closed at one end (A).....Jl	63	WOOD, G. M. Rotating disk approach for cavitation damage studies in high-temperature liquid metal (A).....Ag	71
WEIGHING MACHINES Continuous weighing system (A).....Ag	57	WHITE, HARRY J. (author) Industrial electrostatic precipitation (BR).....D	77	WOOD, HARLAN VALENTINE Obituary.....F	111
Electromechanical batching equipment (A).....S	67	WHITE, THOMAS L. Biography.....D	93	WOOD, R. G. Application of diesel engines for gas-turbine starting service (A).....S	74
WEIGHTS AND MEASURES Accuracy analysis of measurements (A).....Je	74	Elected Fellow of ASME.....D	93	WOODRUFF, LEWIS STURTEVANT Obituary.....My	123
Merging with the metric system.....N	50	WHITMAN, EZRA BAILEY Obituary.....My	123	WOODS, JOHN M. Modernizing existing pipeline integral engine-compressor units (A).....D	71
Metric system: should we convert? (D).....F	86	WHITT, JAMES G. Automatic in-process machine control gaging (A).....S	78	WORLEY, WILL J. Synthesis of mechanical vibration filters with nonlinear characteristics (A).....My	87
Metric system: yes or no? (C).....D	75	WIEBER, GEORGE A. Obituary.....S	104	WORMSER, ARTHUR Obituary.....Ja	122
Package contents challenge (A).....Jl	71	WILHELM, J. E. Flame monitoring and combustion stability-progress report on automation of tangentially fired coal-burning steam generators (A).....Ja	70	WRAY, JOHN L. New deal in depreciation (D).....Ag	75
System of tens (A).....Jl	48	WILHOIT, J. C. Stresses due to a band of normal stress at the entrance of a circular hole (A).....Ap	80	WRIGHT, J. H. Role of a superheat power experiment in the development of supercritical steam nuclear-fire power plants (A).....My	79
WEISE, CARL A. Power for the supersonic transport (D).....Jl	74	WILKINS, WILLIAM BURDETTE Biography.....S	102	WRIGHT, MAYNARD K. Design comments and experimental results for cavitation-resistant inducers up to 40,000 suction specific speed (A).....Ag	72
WEISS, VOLKER Application of Weibull's statistical theory of fracture to sheet specimens (A).....Jl	60	Elected Fellow of ASME.....S	102	WU, S. M. Tool-life testing by response surface methodology.....O	74
Low cycle fatigue damage in pressure vessel materials (A).....My	84	WILKINSON, W. H. Synthesis of concepts in the design method (A).....O	70	Part 1 (A).....O	74
WELCH, C. P. Individual row heat transfer in a crossflow in-line tube bank (A).....N	79	WILLARD, JOHN ANTEMAS Obituary.....Je	107	Part 2 (A).....O	76
WELCH, CHESTER WILLIAM Obituary.....O	108	WILLIAMS, ARTHUR H. Primary power from gas prime movers (A).....S	74	WYGONIK, EDWARD S. Reliability of plastics (A).....S	75
WELDING. See also PIPELINES Automatic and semiautomatic, gas-shielded, metal-arc welding processes for production (A).....O	70	WILLIAMS, C. H. Management development program for engineers (A).....D	72		
Doughnut for ductwork high above ground (A).....F	62	WILLIAMS, D. A. Selective radiation properties of particulate coatings (A).....Jl	64	X X-RAY INSPECTION. See NONDESTRUCTIVE TESTING	
Fine point microwelding (A).....My	64	WILLIAMS, LLEWELLYN Obituary.....My	123	Y YANDRE, THOMAS EDWARD Obituary.....Ja	122
Tooling for precision welding (A).....My	84	WILLIAMS, M. L. Bending stress in a cracked plate on an elastic foundation (A).....O	78	YANG, A. T. Harmonic analysis of spherical four-bar mechanisms (A).....Ja	73
Unique welding processes for special design applications (A).....N	77	WILLIAMS, R. A. Audio-visual concepts in industrial manufacturing (A).....Ap	46	YANG, KWANG-TZU Effect of small crossflow and surface-temperature variation on laminar free convection along a vertical plate (A).....My	90
WELDMENTS Effective use of steel castings in weldments (A).....My	84	Audio-visual systems: key to quality control.....Ag	46	First-order perturbations of laminar free-convection boundary layers on a vertical plate (A).....Je	68
Steel castings in weldments cut costs.....Jl	84	WILSON, R. B. Engineering groups—a favorable social milieu (A).....Ap	79	YANG, W. J. Dynamic response of heat exchangers to the disturbance of wall temperature (A).....Je	78
Working with fabricated machine-tool weldments (A).....My	84	Flight-simulator requirements for high-performance aircraft based on X-15 experience (A).....Ag	62	On the application of the source theory to the solution of problems involving phase change. Part 1—Growth and collapse of bubbles (A).....O	76
WELLAUER, E. J. Effective use of steel castings in weldments (A).....My	84	WIND TUNNELS Theoretical wind tunnel (A).....F	59	Transient heat transfer in a vapor-heated exchanger with arbitrary time-wise-variant flow perturbation (A).....N	79
Steel castings in weldments cut costs.....Jl	28	WINN, L. W. Geometry effects on the threshold of half-frequency whirl in self-acting, gas-lubricated, journal bearings (A).....O	74	YAO, J. C. Large-deflection analysis of buckling of a cylinder under bending (A).....Je	76
WENG, TU-LUNG Strength of thick walled cylindrical pressure vessels (A).....Mr	75	WINSKELL, PAUL L. Alternating current thermoelectric generator (A).....Je	64	YEAGER, CHARLES E. Training of potential astronauts (A).....N	76
WENTWORTH, REGINALD ANDREW Obituary.....Ap	113	WINSLOW, ARTHUR MELVIN Obituary.....S	104		
WENTZ, J. K. Investigation of the effect of journal finish on traction motor-support-bearing performance (A).....O	72	WIRE Wire rod defects peeled away (A).....Mr	65		
WERNER, F. E. Metallurgy, materials, and the design engineer.....S	51	WIENIOWSKI, H. U. Use of Canadian crudes in locomotive diesel engines (A).....Jl	70		
WERNICK, R. J. Analysis of plain cylindrical journal bearings in turbulent regime (A).....D	66				
Static and dynamic characteristics of self-acting, partial-arc, gas journal bearings (A).....D	66				
WESTERGAAARD, VIIGO Type of mechanical grates for incinerators (A).....My	87				
WATERVELT, FRANKLIN H. Algorithm for the simulation of gas-transmission systems (A).....Ja	69				
Analysis and synthesis of engineering systems by digital-computer programming (A).....Ja	68				

2		
YEH, HSUAN		
Sweep and dihedral effects in axial-flow turbomachinery (A).....	Je	69
YELLOTT, JOHN I.		
Silicon cells for pyrheliometers and pyranometers (A).....	Jl	64
YEN, J. T.		
Effect of wall electrical conductance on magnetohydrodynamic heat transfer in a channel (A).....	Je	68
YIELD BEHAVIOR. See METALS		
YING, ANDREW S. C.		
Theoretical approach to the valuation of ultrasonically detected flaws in rotor forgings (A).....	Ja	60
YOPP, PAUL ROWE		
Obituary.....	Mr	111
YOSHIKAWA, D. K.		
Design and evaluation of an axial-flow impulse pump (A).....	Ag	72
YOSHIMURA, Y.		
Buckling of simply supported oblique plates (A).....	O	79
YOUNG, A. P.		
Description and calibration of a modified girdle high-pressure, high-temperature apparatus (A).....	F	79
YOUNG, DANA		
Biography		
Elected Fellow of ASME.....	Ap	108
YOUNG, J. O.		
Experimental investigations of incipient and desinent cavitation (A).....	Ag	70
YOUNG, JOHN HESS, JR.		
Obituary.....	N	113
YOUNG, R. J.		
Effect of small crossflow and surface-temperature variation on laminar free convection along a vertical plate (A).....	My	90
YTTRIUM. See CAST IRON		
YU, YI-YUAN		
Application of variational equation of motion to the nonlinear vibration analysis of homogeneous and layered plates and shells (A).....	My	91
ZETLIN, ALEXANDER		
Biography.....	S	102
Elected Fellow of ASME.....	S	102
Ultrahigh pressure calibration: influence of cubic workpiece configuration (A).....	F	81
ZICK, L. P.		
Nickel-steel tank tests at minus 320...Jl		40
ZINNER, KARL		
Investigations concerning wear of inlet-valve seats in diesel engines (A).....	S	72
ZIVI, S. M.		
Estimation of steady-state steam void-fraction by means of the principle of minimum entropy production (A)....	O	78
ZOROWSKI, CARL F.		
Contest two—a problem in machine design.....	Jl	34
ZYKOWSKI, GERALD L.		
Steady-state heat conduction in a straight fin with variable film coefficient (A).....	O	77
(A) denotes Abstract; [AC] Author's Closure; [BR] Book Review; (C) Correspondence; (D) Discussion; (Ed) Editorial		